

GE Consumer & Industrial

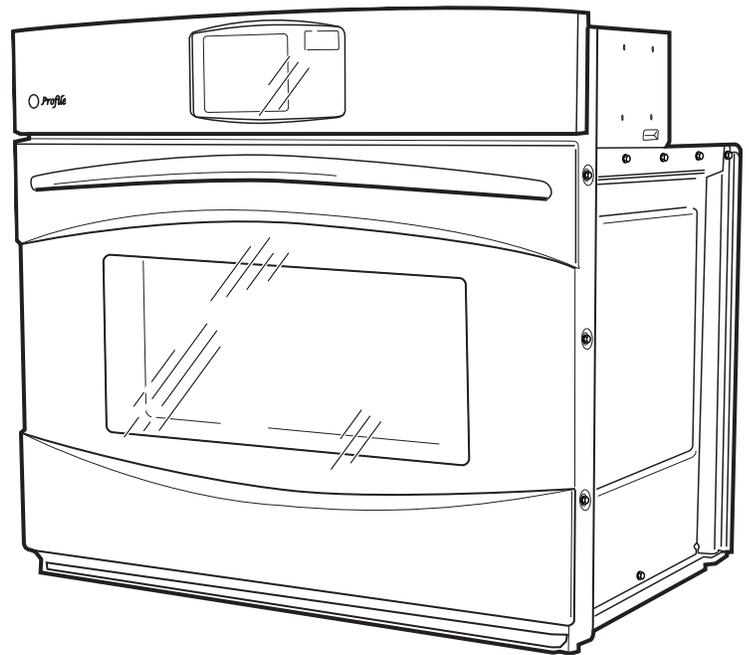
# Technical Service Guide

August 2008

## 30-in. Built-In Wall Ovens

PT920

PT960



31-9174



GE Appliances  
General Electric Company  
Louisville, Kentucky 40225



## **IMPORTANT SAFETY NOTICE**

The information in this service guide is intended for use by individuals possessing adequate backgrounds of electrical, electronic, and mechanical experience. Any attempt to repair a major appliance may result in personal injury and property damage. The manufacturer or seller cannot be responsible for the interpretation of this information, nor can it assume any liability in connection with its use.

### **WARNING**

To avoid personal injury, disconnect power before servicing this product. If electrical power is required for diagnosis or test purposes, disconnect the power immediately after performing the necessary checks.

### **RECONNECT ALL GROUNDING DEVICES**

If grounding wires, screws, straps, clips, nuts, or washers used to complete a path to ground are removed for service, they must be returned to their original position and properly fastened.

***GE Consumer & Industrial***

*Technical Service Guide*

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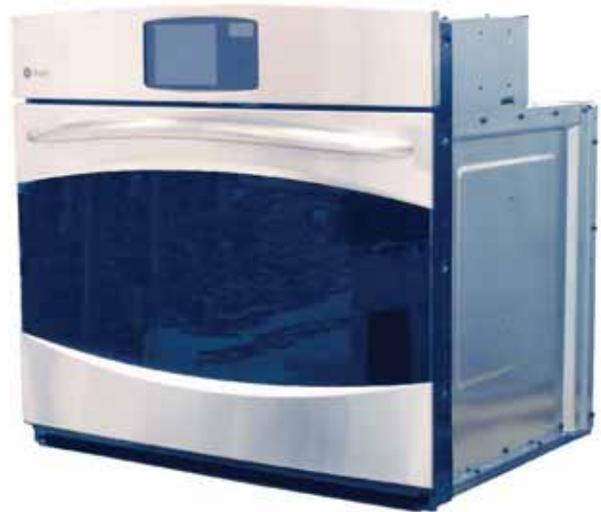
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# Introduction

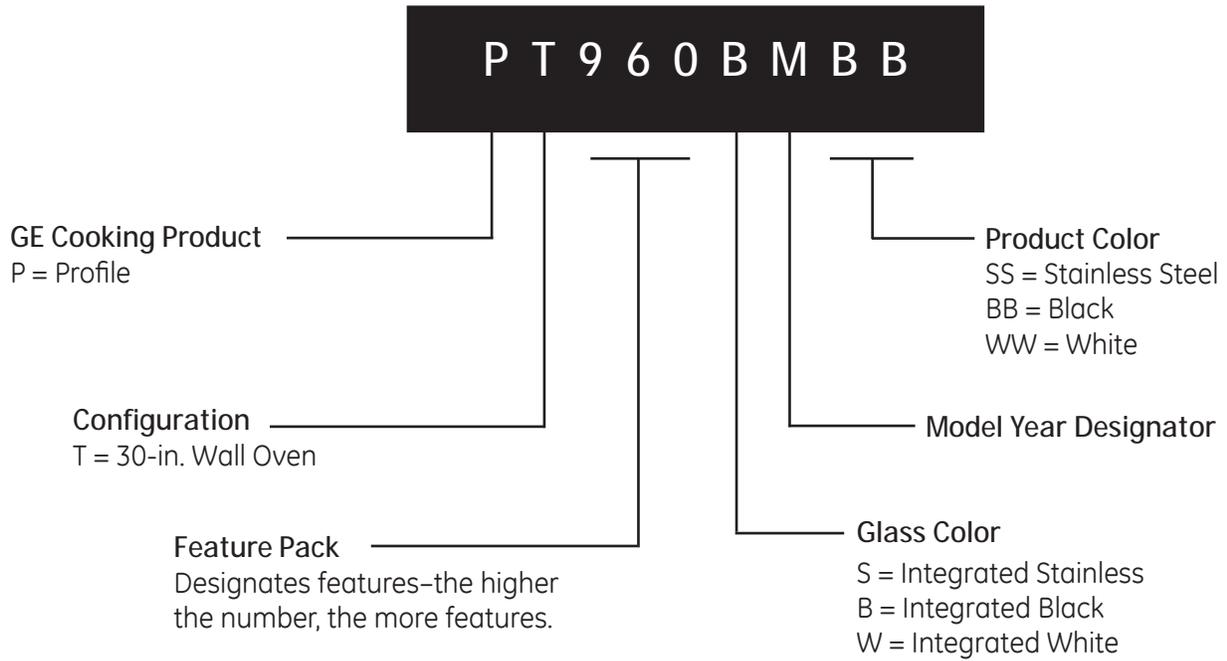
These 30-in. wall ovens have superior style and performance. These ovens feature electronic controls that utilize the precision of modern digital technology. Additional features include:

- Glass Touch LCD Controls - Combine a smooth, easy-to-clean glass design with large, easy-to-read graphics to facilitate easier usage
- PreciseAir™ Convection System - Delivers even air and heat circulation for superior baking and roasting results
- Flat Back Convection Fan - Features a more streamlined convection fan that better accommodates baking and roasting pans
- Convection Bake - Provides ideal airflow throughout the oven cavity, ensuring better baking results
- Convection Roast - Provides even cooking and consistent results, roasting meats faster than a traditional oven
- Hidden Bake Oven Interior - Hides previously exposed bottom element to deliver a clean interior appearance
- Closed Door Broiling - Provides cleaner broiling with a lower wattage heating element
- Self Clean Oven - Conveniently cleans the oven cavity without need of scrubbing
- Improved Interior Oven Lighting - Positions lamps diagonally across the top of the oven to promote better viewing
- Self-Clean, Heavy-Duty Oven Racks - Double coated, porcelain-enameled racks no longer require hand cleaning
- Extra-Large Oven Capacity - Provides a large oven interior ideal for cooking more items at once
- Single Built-in Oven - May be installed below an Advantium oven or microwave oven and/or above a warming drawer
- Single Built-In Oven - May be installed below approved gas or electric cooktops
- Double Built-in Oven - May be installed above a warming drawer



# Nomenclature

## Model Number



## Single Wall Oven



The nomenclature plate is located on the front left behind the oven door in both the single and double configurations.

The mini-manual is located in the control compartment. It is taped to the right side wall.

## Serial Number

The first two characters of the serial number identify the month and year of manufacture.  
Example: **AR**123456S = January, 2008

|         |          |
|---------|----------|
| A - JAN | 2008 - R |
| D - FEB | 2007 - M |
| F - MAR | 2006 - L |
| G - APR | 2005 - H |
| H - MAY | 2004 - G |
| L - JUN | 2003 - F |
| M - JUL | 2002 - D |
| R - AUG | 2001 - A |
| S - SEP | 2000 - Z |
| T - OCT | 1999 - V |
| V - NOV | 1998 - T |
| Z - DEC | 1997 - S |

The letter designating the year repeats every 12 years.

Example:

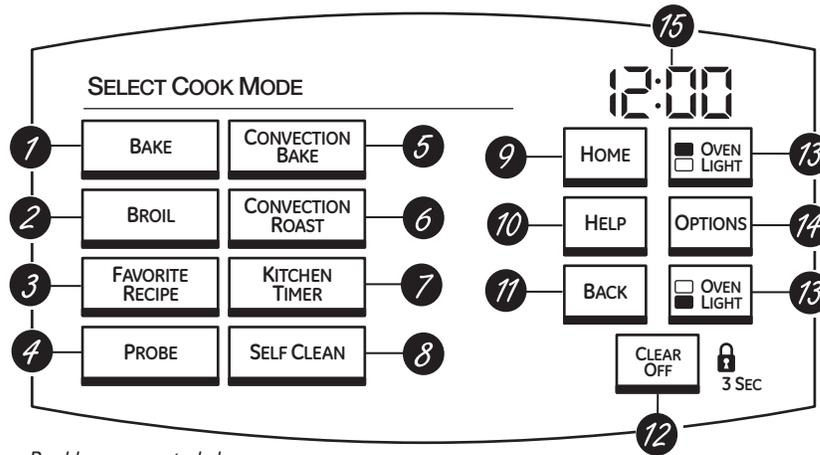
- T - 1974
- T - 1986
- T - 1998

# Control Features

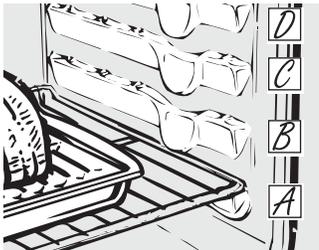
(Throughout this manual, features and appearance may vary from your model.)

## Touch Screen

Touch the graphics on the interactive display to use the oven features.



Double oven control shown.



## How to Set the Oven for Baking or Roasting

- 1** Touch **BAKE**.
- 2** **For double oven models only**, touch **UPPER OVEN** or **LOWER OVEN** to select the desired oven.
- 3** Touch the numbers to set the desired temperature.
- 4** Touch **ENTER**.
- 5** Touch **START**.

The convection fan will turn on during preheating. The control will signal when the oven is preheated—this will take approximately 10 minutes. The screen will show the set temperature.

When the control signals, foods should be placed in the oven.

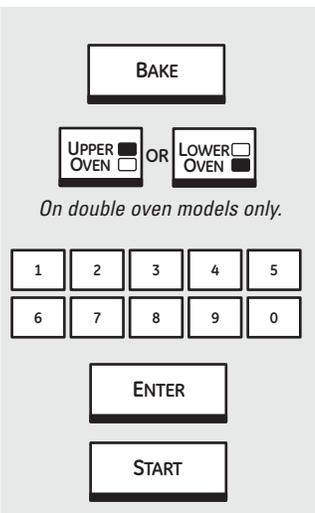
**For double oven models only**, to set the second oven, select **PRESS TO MAKE LOWER OVEN SELECTIONS** or **PRESS TO MAKE UPPER OVEN SELECTIONS** as needed and follow the above steps.

The set temperature may be changed by touching **CHANGE TIME-TEMP**.

The settings may be cancelled by touching **CANCEL**.

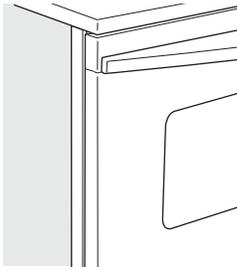
The timer can be set by touching **SET KITCHEN TIMER**. See the *Kitchen Timer* section.

- 6** Check food for doneness at minimum time on recipe. Cook longer if necessary.
- 7** Touch **CANCEL** when cooking is complete.

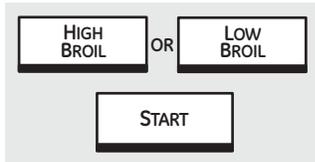


**NOTE:** A cooling fan may automatically turn on and off to cool internal parts. This is normal, and the fan may continue to run even after the oven is turned off.

(Continued next page)



Close the door. **Always broil with the door closed.**



If your oven is connected to 208 volts, rare steaks may be broiled by preheating the broiler and positioning the oven rack one position higher.

## How to Set the Oven for Broiling

Close the door. **Always broil with the door closed.**

- 1 Touch **BROIL**.
- 2 Place the food on a broiler grid in a broiler pan.
- 3 **For double oven models only**, touch **UPPER OVEN** or **LOWER OVEN** to select the desired oven.
- 4 Follow suggested rack positions in the *Broiling Guide*.

The size, weight, thickness, starting temperature and your preference for doneness will affect broiling times. This guide is based on meats at refrigerator temperature.

- 5 Touch **HIGH BROIL** or **LOW BROIL**.
- 6 Touch **START**.

**NOTE:** A cooling fan may automatically turn on and off to cool internal parts. This is normal, and the fan may continue to run even after the oven is turned off.

The broiler does not need to be preheated for most broiling. However,

foods that cook quickly, such as thin strips of meat or fish may require a short preheating period of 2 to 3 minutes to allow the food surface to brown in the same time the food takes to be cooked throughout.

Turn the food only once during broiling.

**NOTE:** Broil will not work if the temperature probe is plugged in. Never leave your probe inside the oven during a broil cycle.

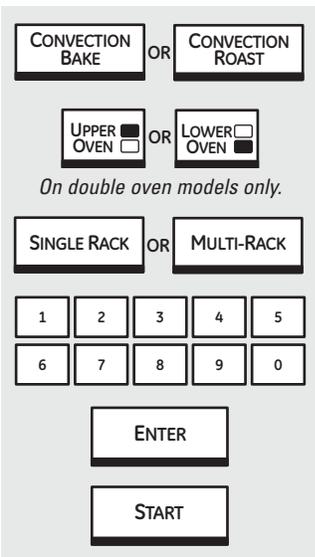
To set the second oven, select **PRESS TO MAKE LOWER OVEN SELECTIONS** or **PRESS TO MAKE UPPER OVEN SELECTIONS** as needed and follow the above steps.

The set temperature may be changed by touching **CHANGE TIME-TEMP**.

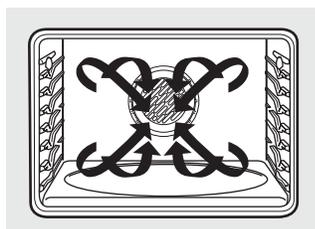
The settings may be cancelled by touching **CANCEL**.

The timer can be set by touching **SET KITCHEN TIMER**. See the *Kitchen Timer* section.

- 7 When broiling is finished, touch **CANCEL**.



On double oven models only.



## How to Set the Oven for Convection Baking or Roasting

- 1 Touch **CONVECTION BAKE** or **CONVECTION ROAST**.
- 2 **For double oven models only**, touch **UPPER OVEN** or **LOWER OVEN** to select the desired oven.
- 3 Two rack options are available:
  - **SINGLE RACK** – Touch for cooking food items on only one rack in convection bake.
  - **MULTI-RACK** – Touch for cooking food items on more than one rack (i.e. 2 or 3 racks) at the same time in Convection Bake. See the *Multi-Rack Convection Baking* section for more information.

- 4 Touch the numbers to set the desired temperature.
- 5 Touch **ENTER**.
- 6 Touch **START**.

The convection fan will turn on during preheating. The control will signal when the oven is preheated—this will take approximately 10 minutes. The screen will show the set temperature.

When the control signals, foods should be placed in the oven.

**For double oven models only**, to set the second oven, select **PRESS TO MAKE LOWER OVEN SELECTIONS** or **PRESS TO MAKE UPPER OVEN SELECTIONS** as needed and follow the above steps.

The set temperature may be changed by touching **CHANGE TIME-TEMP** for the appropriate oven.

The settings may be cancelled by touching **CANCEL** for the appropriate oven.

The timer can be set by touching **SET KITCHEN TIMER**. See the *Kitchen Timer* section.

After cooking is complete, the oven will signal and “MORE TIME” will display for five minutes. Check food for doneness. If more cooking time is needed, touch **MORE TIME** and enter additional cooking time. If not selected, the screen will automatically clear.

(Continued next page)

CLEAR  
OFF

## Control Lockout

Your control will allow you to lock out the touch pads so they cannot be activated when touched.

**NOTE:** On double oven models, this activates the feature for both ovens.

To lock/unlock the controls:

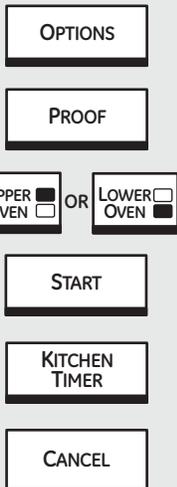
- 1 Touch the **CLEAR/OFF** pad for 3 seconds, until the screen shows **CONTROL LOCKED OUT**.
- 2 To unlock the control, touch the **CLEAR/OFF** pad for 3 seconds, until the home screen appears.

When this feature is on and the touch pads are touched, the control will beep and the display will show **CONTROL LOCKED OUT**.

### NOTES:

- The control lockout mode affects all controls except for the **CLEAR/OFF** pad. No other touch pad will work when this feature is activated.
- The adjustment will be retained in memory after a power failure.

## Option–Proof



## Proofing

The proofing feature maintains a warm environment useful for rising yeast-leavened products.

- 1 Place in the oven on rack B or C and, for best results, cover the dough with a cloth.
- 2 Touch **OPTIONS**.
- 3 Touch **PROOF**.

The oven interior light turns on and then will cycle during proofing.

The proofing feature automatically provides the optimum temperature for the proofing process, and therefore does not have a temperature adjustment.

- 4 **For double oven models only**, touch **UPPER OVEN** or **LOWER OVEN** to select the desired oven.
- 5 Touch **START**.
- 6 Set the **KITCHEN TIMER** for the minimum proof time.
- 7 When proofing is finished, touch **CANCEL**.

■ Proofing will not operate when oven is above 125°F. "OVEN IS TOO HOT" will show in the display.

■ It is not necessary to preheat the oven for proofing.

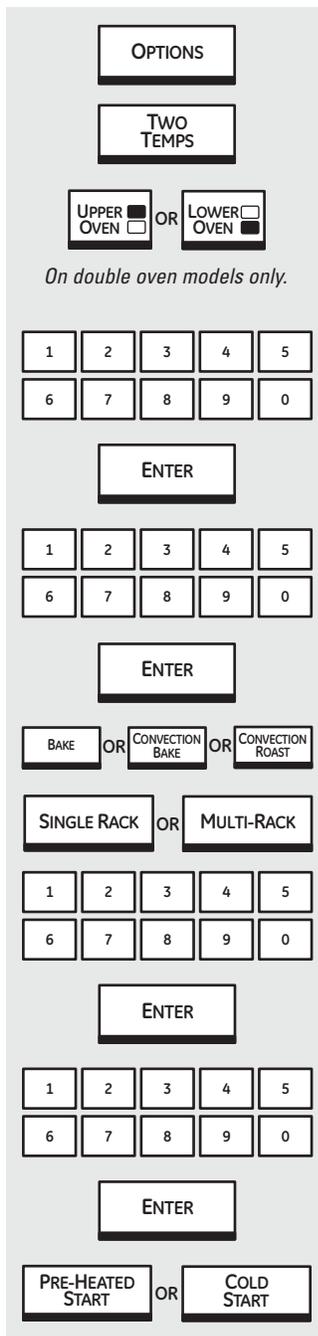
■ To avoid lowering the oven temperature and lengthening proofing time, do not open the oven door unnecessarily.

■ Check bread products early to avoid over-proofing.

**NOTE:** Do not use the proofing mode to reheat cold food or to keep hot, cooked food warm. The proofing oven temperature is not hot enough to hold foods at safe temperatures. Use the **WARM** feature to keep hot food warm.

Note: The convection fan and the lights are operating during this function.

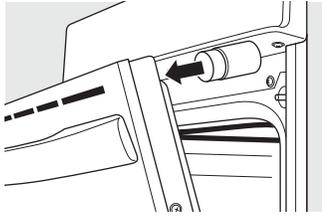
# Option–Two Temps



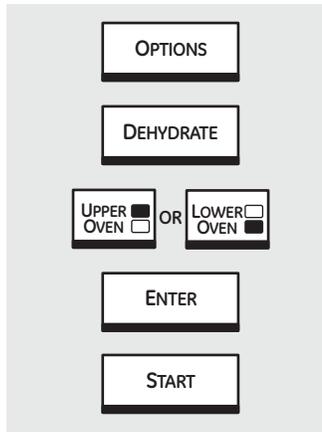
## Two Temps

Use to set a first temperature with a cooking time and also a second temperature with a second cooking time.

- 1 Touch **OPTIONS**.
- 2 Touch **TWO TEMPS**.
- 3 **For double oven models only**, touch **UPPER OVEN** or **LOWER OVEN** to select the desired oven.
- 4 Touch the numbers to set the desired first temperature.
- 5 Touch **ENTER**.
- 6 Touch the numbers to set the desired length of the first cooking time.
- 7 Touch **ENTER**.
- 8 Touch **BAKE**, **CONVECTION BAKE** or **CONVECTION ROAST** as desired.
- 9 If **CONVECTION BAKE** was selected, touch **SINGLE RACK** for one rack or **MULTI-RACK** for two or three rack cooking.
- 10 Touch the numbers to set the desired second temperature.
- 11 Touch **ENTER**.
- 12 Touch the numbers to set the desired length of the second cooking time.
- 13 Touch **ENTER**.
- 14 Touch **PRE-HEATED START** or **COLD START**.



Place the magnetic end onto the upper inside surface of the oven door. Close the door against the doorstop.



## Dehydrate

Dehydration (Drying) is a method of preserving fruits, vegetables, herbs and meats by removing moisture so bacteria, yeast and mold cannot grow and spoil the food. The oven uses an automatic set temperature and the convection fan to remove moisture from the foods to dry and preserve them. Note that over 12 hours may be required to dry some foods.

Accurate and complete information on basic food drying is available from your local cooperative extension service office. To locate this office in your area, look in your telephone directory for the county government listings under your county name.

During dehydration, your oven door must remain partially open to allow for air circulation and moisture removal.

Use the dehydration doorstop, which is included with your oven, to hold the door open for dehydration.

- 1 Open the oven door.
- 2 Place the magnetic end of the doorstop onto the upper inside surface of the oven door.
- 3 Close the oven door, allowing the door to rest against the doorstop.
- 4 Touch **OPTIONS**.
- 5 Touch **DEHYDRATE**.
- 6 **For double oven models only**, touch **UPPER OVEN** or **LOWER OVEN** to select the desired oven.
- 7 Enter the temperature (max. 200°F).

8 Touch **ENTER**.

9 Touch **START**.

### NOTES:

- Store the doorstop in a safe place when not in use.
- Use only the doorstop provided with your oven and only use the doorstop while dehydrating.
- Do not store the doorstop in the oven.
- Remember that the proper preparation, treatment and storage of food are essential for the quality and safety of dried food.

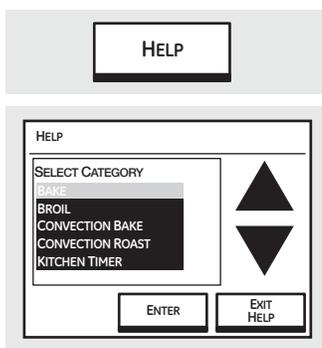
### Dehydrating Helpful Tips:

- Multiple racks of food can be dried at one time.
- Drying time will vary depending on several factors:
  - number of racks of food
  - amount of food on each rack
  - size, shape and thickness of food
  - type of drying trays used
- Use food preservation resources, such as your local cooperative extension service, as a guide for selecting food-safe drying trays.

To order a replacement doorstop, call our National Parts Center at 800.626.2002 and reference WB08T10024.

**Note:** The heat for this function is generated by the broil element. The broil element cycles on and off to maintain the selected temperature.

## Help Feature

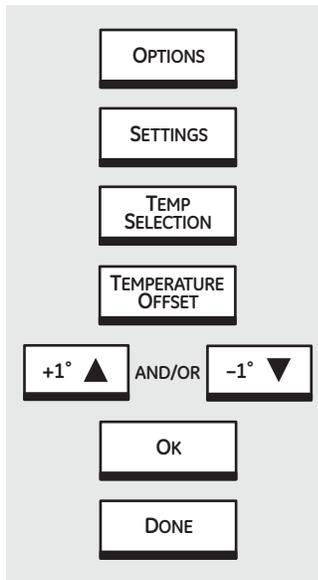


### Help

Touch this pad to find out more about your oven's features.

- 1 Touch the **HELP** pad.
- 2 Touch the ▲ (up) or ▼ (down) arrow to select the desired feature.
- 3 Touch **ENTER**.
- 4 Touch the ▼ (down) arrow, if present, to see all of the HELP text.
- 5 Touch **EXIT HELP** to exit the HELP screen.

# Options—Settings



## Adjust the Oven Thermostat—Do It Yourself!

**Note:** This adjustment will only affect baking and roasting temperatures; it does not affect broiling, convection or self-cleaning temperatures.

The adjustment will be retained in memory after a power failure.

1. Touch **OPTIONS**.
2. Touch **SETTINGS**.
3. Touch **TEMP SELECTIONS**.
4. Touch **TEMPERATURE OFFSET**.
5. The oven temperature can be adjusted up to (+) 35°F hotter or (-) 35°F cooler. Touch + 1° or - 1° to increase or decrease the offset temperature in 1° increments.
6. When you have made the adjustment, touch **OK** and **DONE**. Use your oven as you would normally.

**Note:** Other adjustments controlled by **OPTIONS - SETTINGS** include:

- To set the Clock
- 12-Hour Shut-Off
- Clock Blackout
- Sabbath Feature
- Fahrenheit to Celsius Temperature Selection
- Auto Recipe™ Conversion (on some models)
- Language
- Display Color
- Sound On/Off
- Sound Volume
- Timer Signal
- Kitchen Timer Signal
- Sound/Volume Default

**Note:** See *Use & Care* for detailed procedures.

## Sales Mode

The oven control can be operated in SALES MODE. When the unit is connected to 120 VAC from L1-N, the control will function normally. The 240 VAC relays will not function.

## Operational Notes

Certain modes, when selected, will automatically enter into a preheat. The PREHEAT light will turn on and 100°F will appear in the display. (The temperature display will start to change once the oven temperature reaches 100°F.)

For convection ovens, the convection fan will run during the Single-Rack preheat cycle and remain on until the oven has reached the set temperature. The bake element is on for 20 seconds, then the broil element is on for 70 seconds until preheat is completed. After preheat, the bake element or the broil element is cycled to maintain temperature. Multi-Rack preheat cycle uses only the bake element with the convection fan.

For non-convection ovens, the bake element is on for 60 seconds, then the broil element is on for 30 seconds until preheat is completed. After preheat, the bake element or the broil element is cycled to maintain temperature.

The control will beep when the oven is preheated—this may take approximately 10 minutes. The PREHEAT light will turn off and the display will show the set temperature.

Preheat Chart

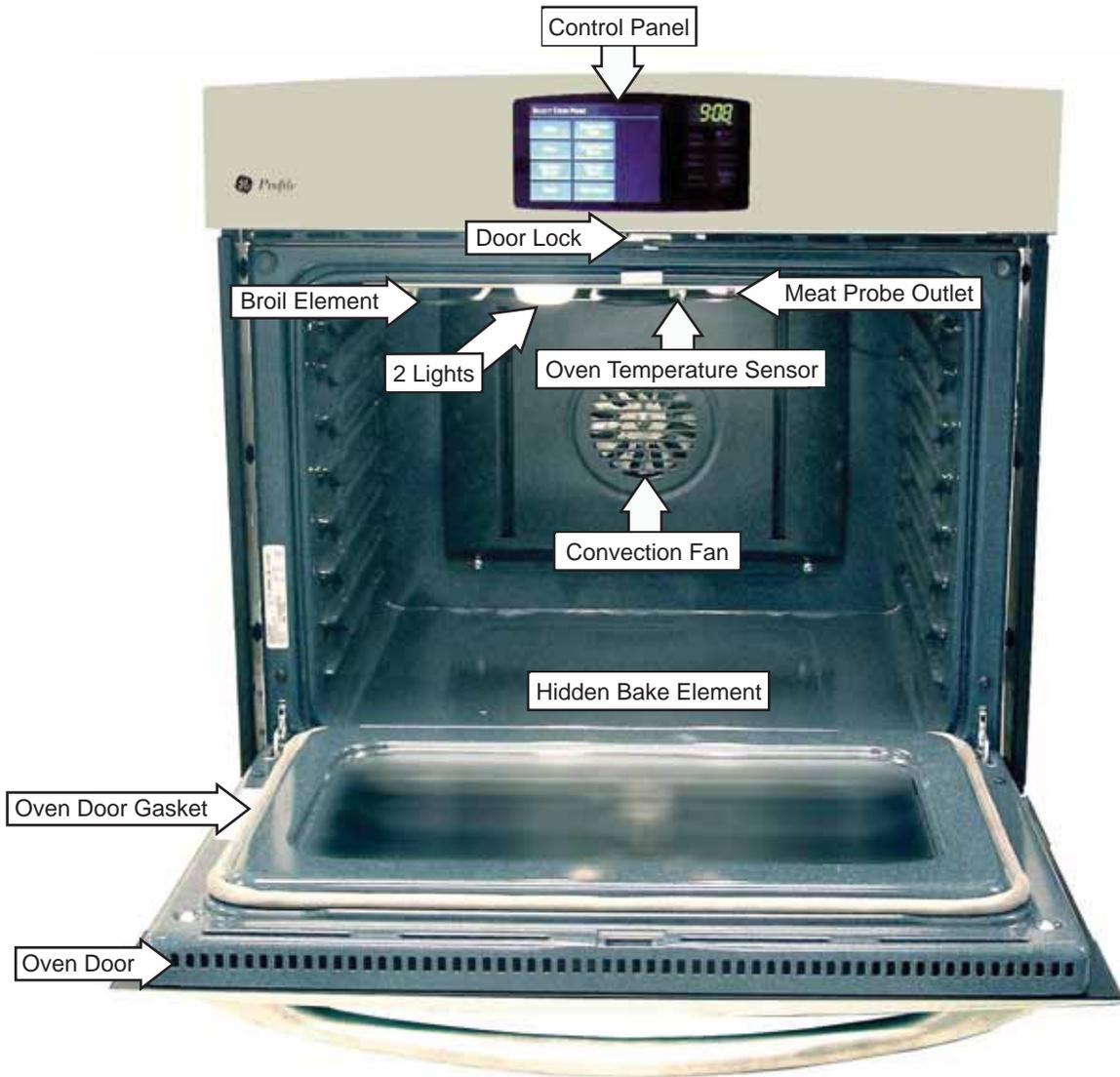
| Mode                     | Preheat |
|--------------------------|---------|
| Proof                    | No      |
| Dehydrate                | No      |
| Bake                     | Yes     |
| Convection Bake - 1 Rack | Yes     |
| Convection Bake - Multi  | Yes     |
| Convection Roast*        | Yes     |
| Convection Broil         | No      |
| Broil High               | No      |
| Broil Low                | No      |
| Clean                    | No      |
| Probe Usage              | No      |

\*Preheat for Convection Roast uses only the broil element with the convection fan. The convection will NOT reverse directions during Convection Roast preheat.

- The convection fan will cycle on and off to change direction while cooking to best distribute hot air in the oven. The convection fan shuts off when the oven door is opened.
- A cooling fan will turn on to cool internal parts. This is normal, and the fan may continue to run even after the oven is turned off.
- Broil will not work if the temperature probe is plugged in.
- When using the probe, you can use the timer, but you cannot use timed oven operations.
- On the double wall oven, the oven control will automatically set the oven that has the probe plugged into it.
- In Convection Bake, the bake element and the fan operate whenever the oven is preheating.
- On the double wall oven, you can use timed baking in both ovens at the same time.
- The Clean cycle can be set for a minimum of 3 hours and a maximum of 5 hours. The default setting is 5 hours. The 5-hour set time consists of 4 hours and 20 minutes of cleaning and 40 minutes of cool down. The door will unlock at an approximate temperature of 450°F.
- On the double wall oven, you can set a clean cycle in both ovens at the same time. The last oven set will automatically delay its start until the first oven's clean cycle cools to 400°F. On the double wall oven, you can bake or broil in one oven and self-clean in the other at the same time.
- Self-Clean will not work if the temperature probe is plugged in or if the Sabbath feature is set.
- Proofing will not operate when oven is above 125°F. The display will show "too hot". Allow the oven time to cool. During Proof, the oven light is on continuously. The convection fan will operate 60 seconds in one direction, 60 seconds in the other direction, then off for 600 seconds.
- In Warm, found under options, the broil and the bake elements are used to reach these target temperatures: Low = 160°F; Medium = 180°F; and High = 195°F. These temperatures are all ±15°F. The convection fan runs in the "crisp" mode and does not run in the "moist" mode.

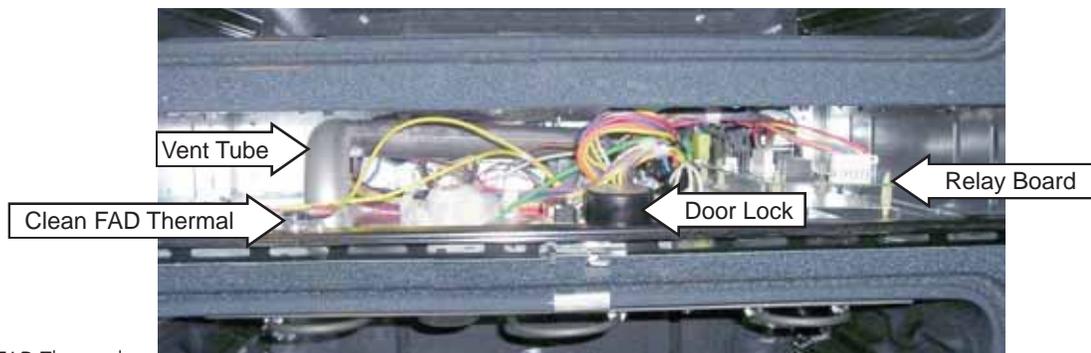
# Component Locator Views

Wall Oven (Single Oven shown)



## Control Compartment

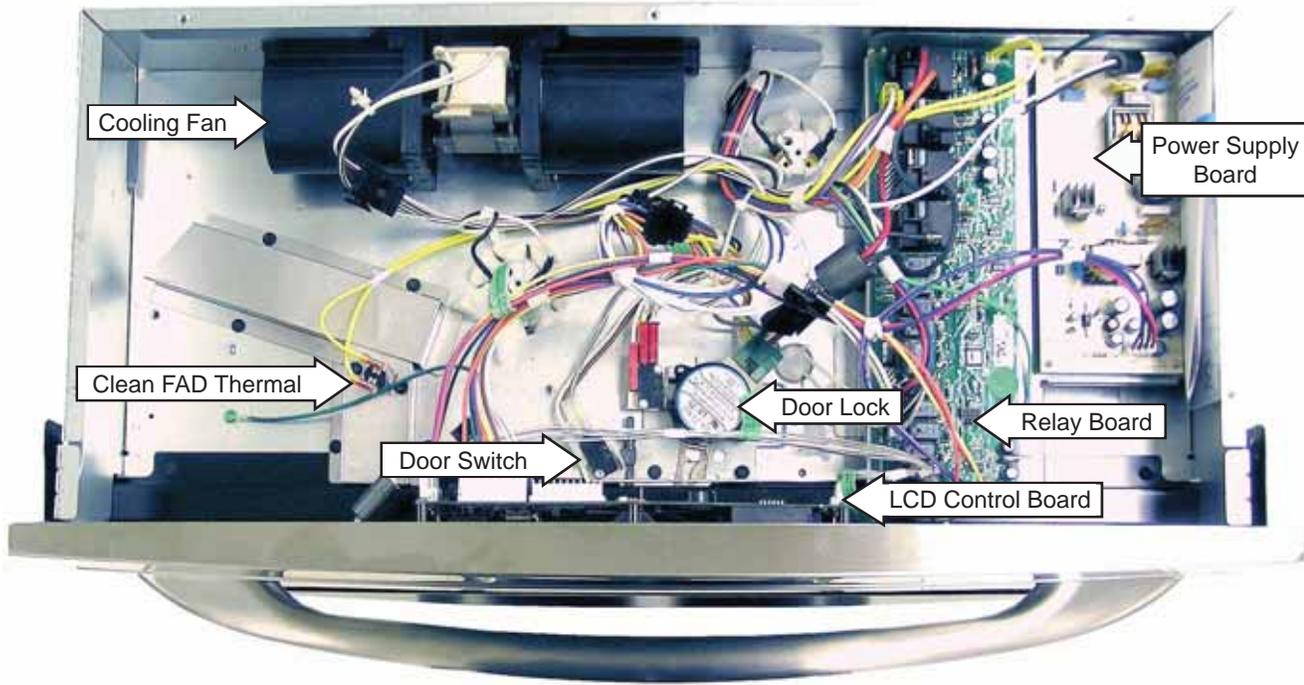
Bottom Double Wall Oven (Middle Trim Assembly Shown Removed)



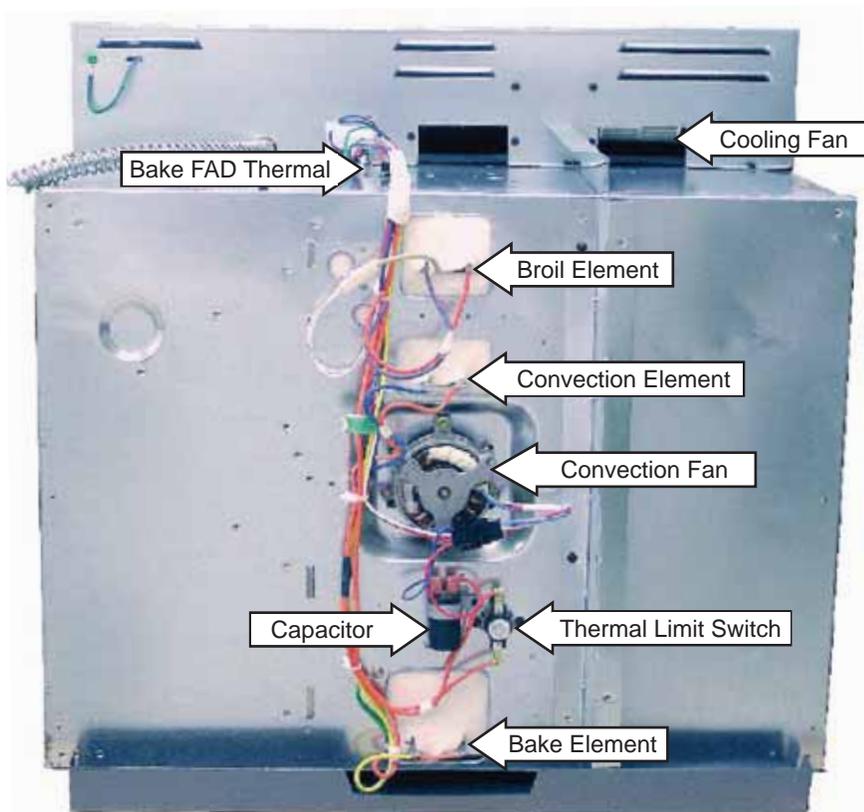
Note: Bake FAD Thermal and Cooling Fan are located behind Vent Tube.

## Control Compartment

Top of Oven (Single Oven and Top Double Oven)



Back of Single Oven (All Rear Covers Shown Removed)



## Oven Component Access Chart

### WARNING:

- The single and double wall ovens are heavy and require two people to remove them from the installation. Care should be taken when removing and installing.
- Sharp edges may be exposed when servicing. Use caution to avoid injury. Wear Kevlar gloves or equivalent protection.

|                                       | Single | Double Upper | Double Lower | Front Serviceable Oven Components | Components Requiring Oven Removal |
|---------------------------------------|--------|--------------|--------------|-----------------------------------|-----------------------------------|
| Bake Element                          | ●      | ●            | ●            |                                   | ●                                 |
| Broil Element                         | ●      | ●            | ●            | ●                                 |                                   |
| Convection Bake Element               | ●      | ●            | ●            | ●                                 |                                   |
| Convection Fan Blade                  | ●      | ●            | ●            | ●                                 |                                   |
| Convection Fan Capacitor              | ●      | ●            | ●            |                                   | ●                                 |
| Convection Fan Motor                  | ●      | ●            | ●            |                                   | ●                                 |
| Control Panel Assembly                | ●      | ●            | n/a          | ●                                 |                                   |
| Cooling Fans                          | ●      | ●            | ●            |                                   | ●                                 |
| Door Assembly                         | ●      | ●            | ●            | ●                                 |                                   |
| Door Switch                           | ●      | ●            | ●            | ●                                 |                                   |
| Door Hinge Receiver                   | ●      | ●            | ●            |                                   | ●                                 |
| Lock Assembly                         | ●      | ●            | ●            | ●                                 |                                   |
| Meat Probe Outlet                     | ●      | ●            | ●            | ●                                 |                                   |
| Oven Light Assembly                   | ●      | ●            | ●            | ●                                 |                                   |
| Oven Temperature Sensor               | ●      | ●            | ●            | ●                                 |                                   |
| Power Supply Board                    | ●      | ●            | ●            | ●                                 |                                   |
| Relay Boards                          | ●      | ●            | ●            | ●                                 |                                   |
| Thermal Switch (Limit Thermal Switch) | ●      | ●            | ●            |                                   | ●                                 |
| Thermal Switch (Bake FAD)             | ●      | ●            | ●            |                                   | ●                                 |
| Thermal Switch (Clean FAD)            | ●      | ●            | ●            | ●                                 |                                   |
| Vent Tube/Smoke Eliminator            | ●      | ●            | ●            | ●                                 |                                   |

# Oven Components

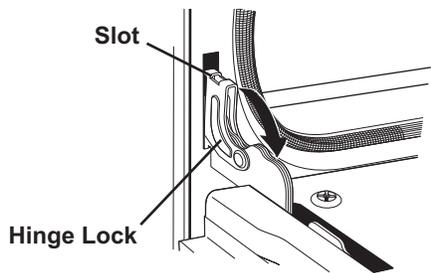
## Door Assembly

The oven door can be separated into 2 assemblies. The outer assembly consists of the outer panel and a replaceable door handle. The inner assembly is made up of the inner panel, door gasket, 3 glass panels, air channel, insulation retainer, and replaceable door hinge assemblies.

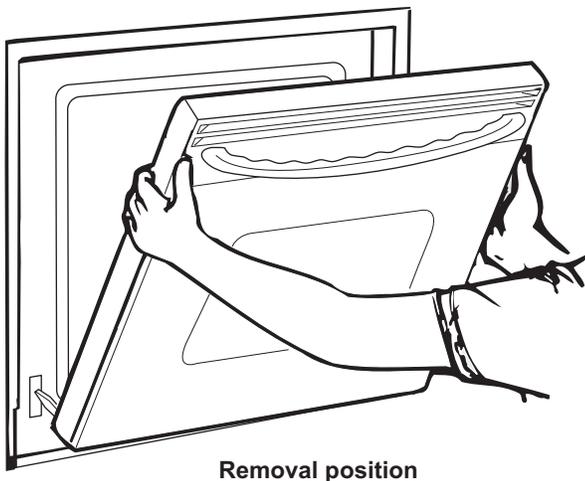
**Caution:** The door is very heavy. Use the correct lifting procedure. Do not lift the door by the handle.

### To remove the door:

1. Open the door fully. Pull the hinge locks down toward the door frame, to the unlocked position. (This may require a flat-blade screwdriver to start the hinge locks moving).

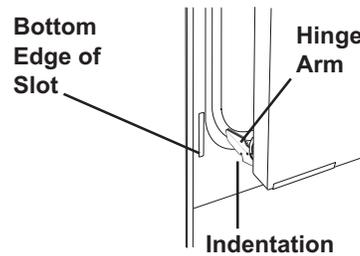


2. Firmly grasp both sides of the door at the top.
3. Close the door to the door removal position, then lift it up and out.

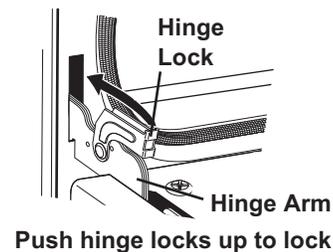


### To replace the door:

1. With the door at the same angle as the removal position, seat the indentation of the hinge arm into the bottom edge of the hinge slot. The notch in the hinge arm must be fully seated into the bottom of the slot.



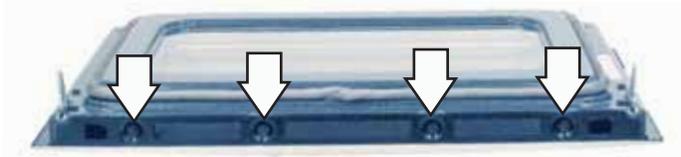
2. Open the door fully. If the door will not fully open, the indentation is not seated correctly in the bottom edge of the slot.
3. Push the hinge locks up against the front frame of the oven cavity to the locked position.



4. Close the oven door and check for proper alignment.

**To remove the outer door assembly:**

1. Remove the door.
2. Place the inner door assembly, gasket side up, on a protective surface.
3. Remove the four 1/4-in. hex-head screws from the bottom of the outer door assembly.



4. Remove the two T15 Torx screws (1 on each side) from the inner door assembly.



**Note:** The inner door assembly is heavier than the outer door assembly.

5. Separate the inner door assembly from the outer door assembly.
6. Remove the two 1/4-in. hex-head screws and brackets that hold the door handle to the outer door assembly.

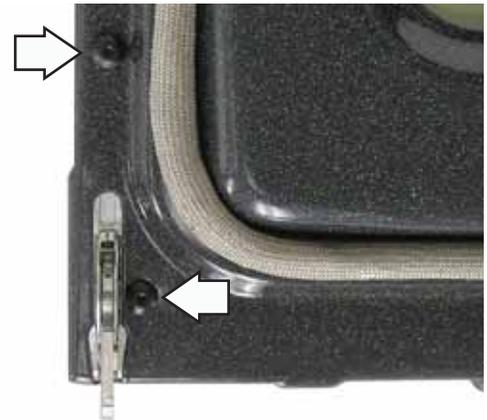
Door Shown with Inner Door Assembly Removed



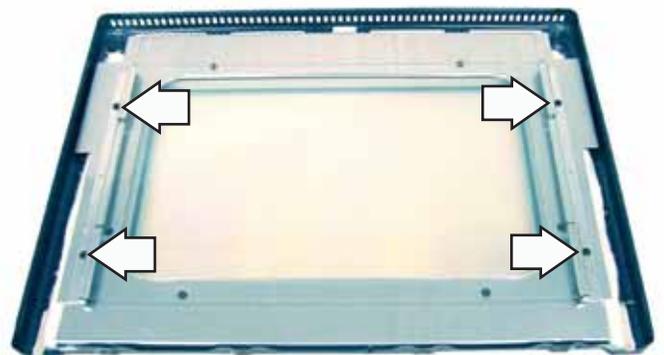
**Caution:** Care must be taken if reinstalling the door handle. Overtightening the screws can damage the handle. Hand-tighten the screws and make sure the handle fits snugly to the door panel. (Do not use electric driver.)

**To replace the inner door assembly:**

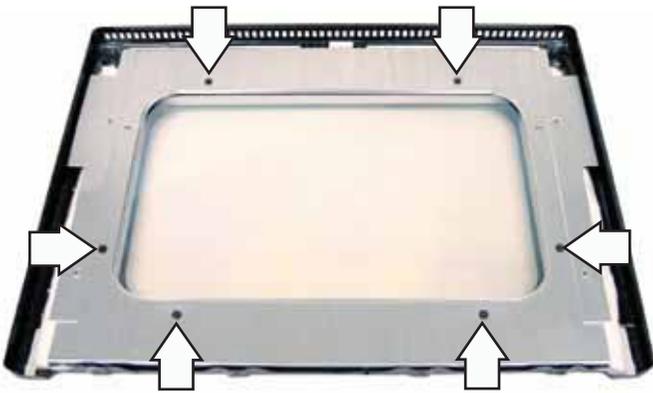
1. Remove the outer door assembly. (See **Door Assembly**.)
2. Remove the four T15 Torx screws (2 on each side) that attach each door hinge to the inner door. Carefully turn the door over and remove both door hinges.



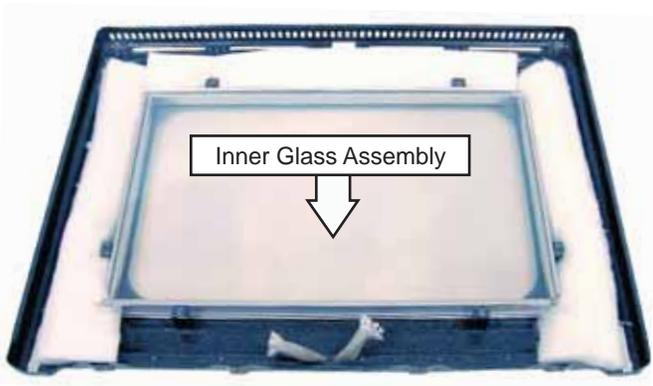
3. Remove the four 1/4-in. hex-head screws that attach the glass and side brackets (glass closest to the outer door glass) to the inner door.



- Remove the six 1/4-in. hex-head screws that hold the heat barrier to the inner door. Remove the barrier.



- Remove the insulation and the inner glass assembly from the inner door.

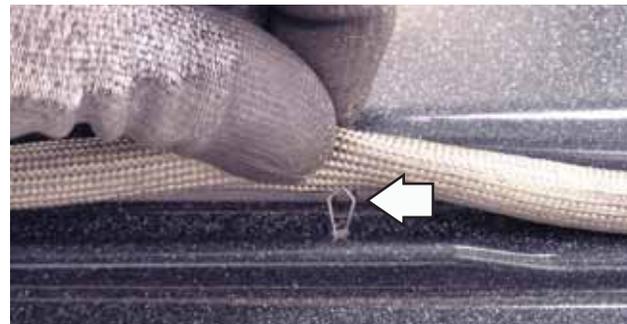


Arrows on the side of the inner glass assembly indicate the direction in which the inner oven door glass is installed. The arrows should be pointing toward the oven cavity.



### Door Gasket

The gasket forms a complete seal around the front edge of the oven liner and the inner door panel. The door gasket is attached to the inner door panel by spring clips. When removing the gasket, pull the ends of the gasket out of the slots at the bottom of the door. Place a finger under the gasket beside each clip and pull straight up.



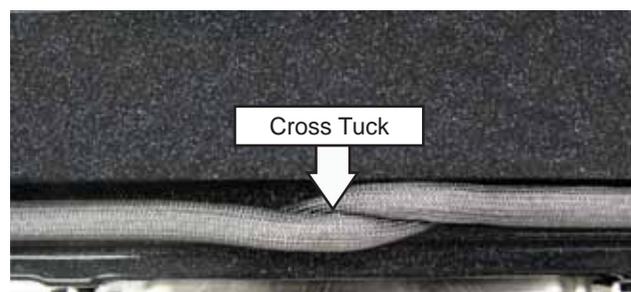
### Assembly Notes

When assembling the door assembly, make sure the hinges are parallel to each other and perpendicular to the door liner. If not, the hinge may bind on the receiving channel of the door. If the new hinge is not in the cocked and locked position after installing, place the bottom of the door against a firm, protected surface and push the hinge arm down to the cocked position. Pull the hinge lock back against the door liner surface to lock the hinge in this position.

Air enters the door assembly through large slots in the bottom and flows upward between the inner and outer assemblies, exhausting through slots in the top of the door. **DO NOT INSULATE THIS AIR CHANNEL.**

When installing the door gasket, it is helpful to fold the gasket in half and locate the center clip. Insert the clip at the top of the door and work your way around the door.

Make sure the gasket is cross-tucked in the bottom slots of the inner door panel. Use a small screwdriver to tuck the loose ends of the gasket into the slots. The overlap is required to ensure a proper door seal.



## Oven Removal

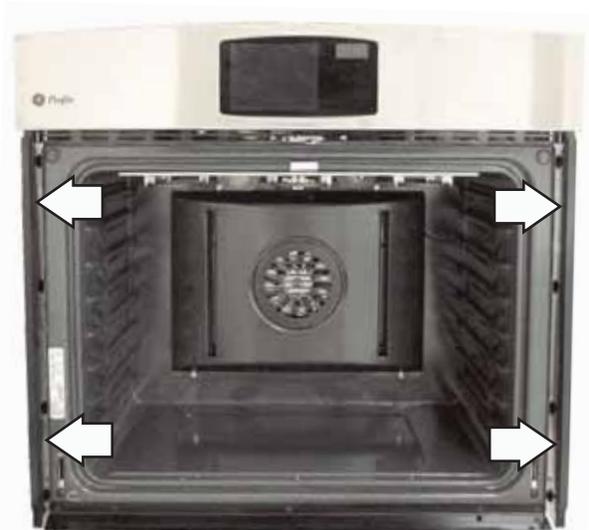
The replacement of certain components require oven removal. (See **Oven Component Access Chart**.)

**WARNING:** The oven is heavy and requires two people to remove it from the installation.

**Note:** Sharp edges may be exposed when servicing. Use caution to avoid injury. Wear Kevlar gloves or equivalent protection.

To remove the oven:

1. Disconnect power to the oven.
2. Remove oven doors and racks. (See **Door Assembly**.)
3. Remove the 4 Phillips-head screws (2 on each side) from the side trims that hold the oven in place. (There are 8 Phillips-head screws on the double oven.)



4. Utilize a table or platform in front of the oven and pull the oven completely out.

**Note:** When reinserting ovens into cabinet opening, ensure conduit is properly positioned behind ovens. (See the **Installation Instructions** manual.)

## Control Compartment Access

It may be necessary to remove the oven from the installation to gain access to some components. (See **Component Access Chart**.)

**Note:** The glass touch boards and the control panel front are one unit and are ordered as an assembly.

To access the control compartment on single or double ovens:

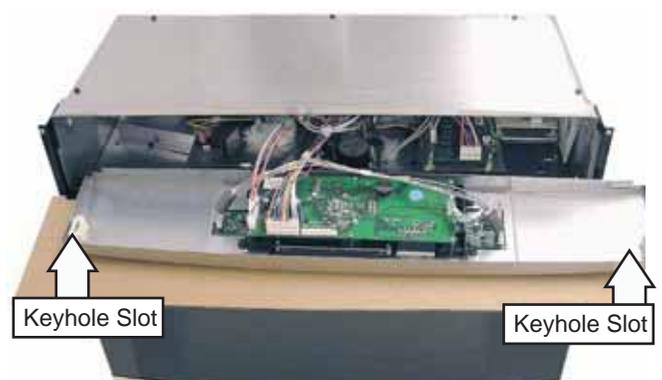
1. Open oven door.
2. Remove the three 1/4-in. hex-head screws that attach the bottom of the control panel to the vent trim.



3. Place a cardboard protector on top of the oven door and close the door.

**Note:** The control panel has keyhole slots at the top and is held very tight to the side trims.

4. Carefully push the control panel up, then pull out at the bottom.
5. Place the control panel on a protected oven door as shown.



**Note:** When installing the control panel, make sure the bottom edge of the control panel sits on top of the metal air divider and vent trim.

## Lower Oven Control Compartment Access

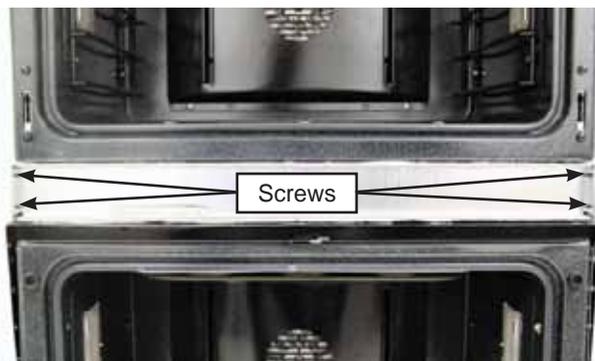
**Note:** It may be necessary to remove the oven from the installation to gain access to some components. (See **Component Access Chart.**)

To access the lower oven control compartment:

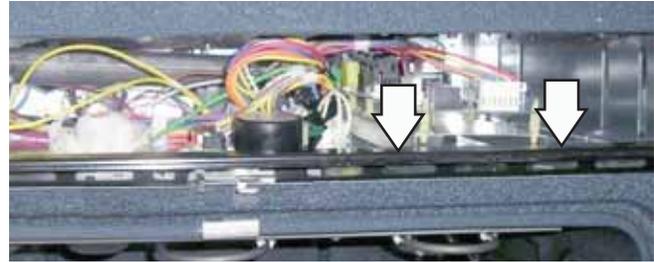
1. Remove the upper oven door. (See **Door Assembly.**)
2. Remove the 2 Phillips-head screws from the top of the middle trim.
3. Open the lower oven door.
4. Remove the three 1/4-in. hex-head screws from the bottom of the middle trim. Remove the trim.



5. Remove the four 1/4-in. hex-head screws that attach the cross member to the front of the control compartment. Remove the crossmember.



6. Remove the two 1/4-in. hex-head screws from the relay board tray.



7. Remove the four 1/4-in. hex-head screws (one under the relay board) that attach the vent trim to the front of the cabinet. Remove the trim.

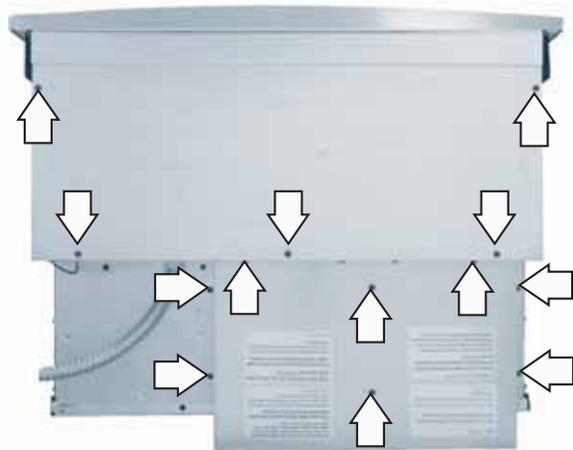


## Top Access Panels

Removing the top access panels permits access to the control compartment, cooling fan, and the bake FAD thermal.

The oven must be removed to access the 1/4-in. hex-head screws that attach the top panels. (See **Oven Removal.**)

The front top access panel has 5 hex-head screws. The rear top access panel has 8 hex-head screws.



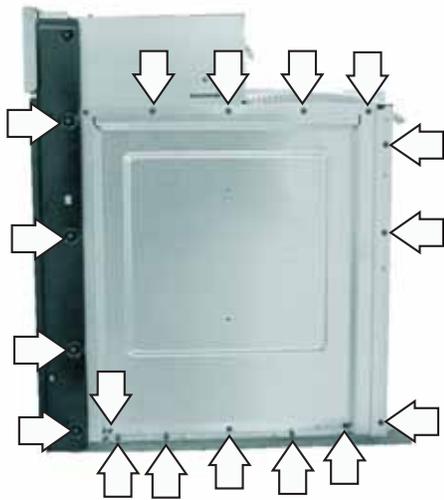
## Side Access Panels

It is necessary to remove the side trims prior to removing the side access panels. The oven must be removed to access the 1/4-in. hex-head screws that attach the side trims and access panels. (See **Oven Removal.**)

Each single wall oven side trim is attached with 5 hex-head screws. Each double wall oven side trim is attached with 9 hex-head screws.

Each single wall oven side access panel is attached with 14 hex-head screws. Each double wall oven upper side access panel is attached with 17 hex-head screws. Each double wall oven lower side access panel is attached with 14 hex-head screws.

Single Wall Oven (right side)



Double Wall Oven

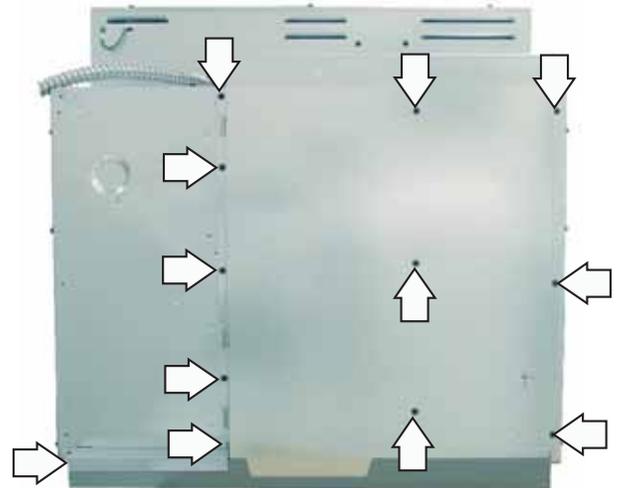


## Rear Access Panels

The rear top access panel must first be removed before removing the upper rear access panel. (See **Top Access Panel.**)

The single wall oven has 2 rear access panels attached with twelve 1/4-in. hex-head screws. The double wall oven has 3 rear access panels attached with nineteen 1/4-in. hex-head screws.

Single Wall Oven



Double Wall Oven



## Oven Temperature Sensor

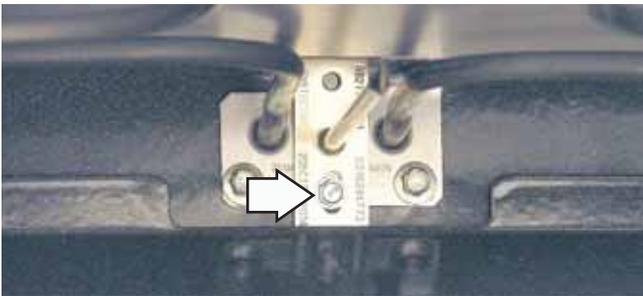
The oven temperature sensor can be tested from the EOC. (See **Control Board Testing**.) The resistance of the temperature is:

- 1091  $\Omega$  at room temperature
- 1654  $\Omega$  at 350°F
- 2634  $\Omega$  at 865°F (Clean temperature)

The oven temperature sensor has a resistance change rate of 2  $\Omega$  per 1°F.

### To remove the oven temperature sensor:

1. Disconnect the power and remove the oven racks.
2. Remove the 1/4-in. hex-head screw that attaches the sensor to the broiler element bracket.



3. Carefully pull the sensor and sensor wiring harness from the oven liner.

**Note:** The wires may be caught up under the broiler element terminal. The broiler element terminal may need to be loosened.

4. Disconnect the sensor wiring harness.



**Note:** When reinstalling the sensor, use a small flat-blade screwdriver to push and guide the sensor wire harness into the oven liner.

## Broil Element

**Note:** The resistance of this component can be tested from the EOC. (See **Control Board Testing**.)

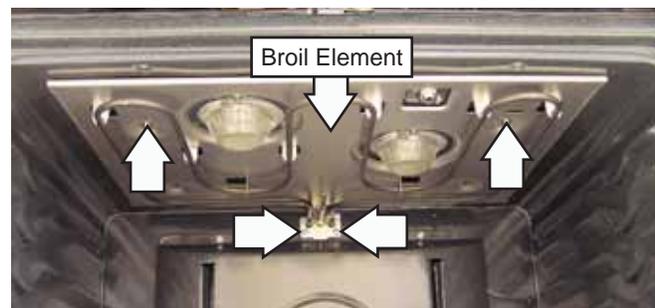
The broil element will not work if the meat probe is plugged in.

The element is rated at 2400 watts, has an approximate resistance value of 24  $\Omega$ , and draws approximately 11 amps.

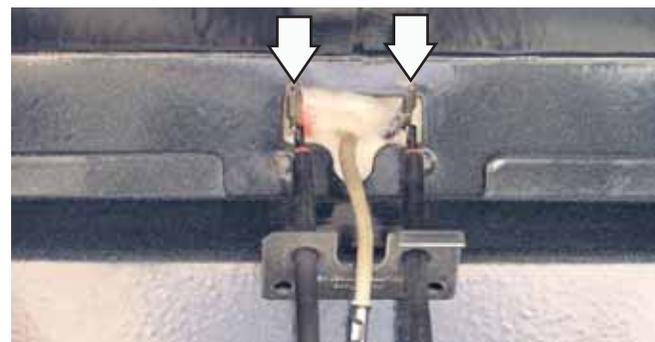
The broil element is located on the back wall of the oven and can be removed from inside the oven cavity.

### To remove the broil element:

1. Disconnect the power from the oven and remove the oven racks.
2. Remove the 1/4-in. hex-head screw that attaches the sensor to the broiler element bracket. (See **Oven Temperature Sensor**.)
3. Carefully pull out the sensor approximately 2-in. from the broiler element bracket.
4. Remove the four 1/4-in. hex-head screws that hold the broiler element to the oven cavity.



5. Carefully pull, then lower the broiler element towards the front of the oven until the element terminals are accessible.
6. Disconnect the wires from the broiler element.

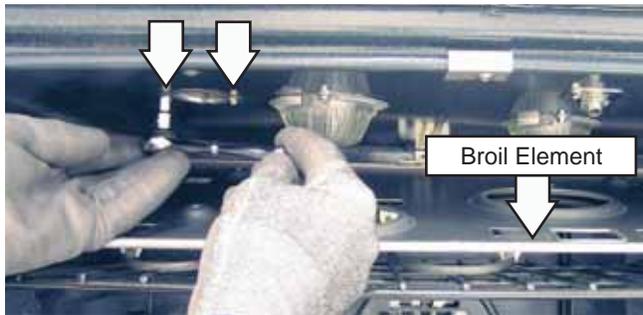


## Vent Tube/Smoke Eliminator

The oven vent tube/smoke eliminator is located in the top, left, front corner of the oven cavity above the broiler element shield. Air vented from the oven cavity will pass through the catalyst.

To remove the vent tube/smoke eliminator:

1. Place an oven rack in the next-to-the-top position and remove any remaining oven racks.
2. Remove the two 1/4-in. hex-head screws that attach the broiler element to the top of the oven cavity, then carefully lower the broiler element to the oven rack.



3. Remove the two 1/4-in. hex-head screws that hold the vent tube to the top of the oven cavity.
4. Remove the vent tube from the oven cavity.



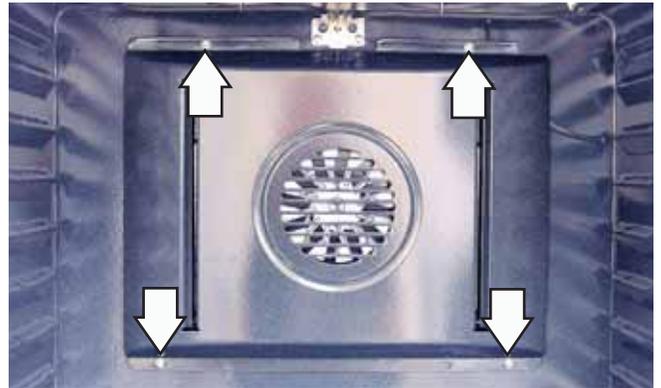
## Convection Fan Blade and Motor

### The Convection Fan Blade

The convection fan blade is located on the back wall of the oven cavity and is removed separately from the convection fan motor.

To remove the convection fan blade:

1. Remove the oven racks.
2. Remove the four 1/4-in. hex-head screws that hold the convection cover to the back wall of the oven cavity.



3. The fan blade is attached to the motor shaft with a left-hand thread 1/2-in. hex-nut. Turn the nut clockwise to remove the hex-nut.



### The Convection Fan Motor

The convection fan motor is located on the back side of the oven cavity and operates during the following modes:

- Convection Bake
- Convection Roast
- Proof
- Preheat
- Clean

The convection fan will turn on (after a short delay). The fan may cycle on and off, and change direction in any of these modes, to best distribute hot air in the oven. The convection fan shuts off when the door is opened.

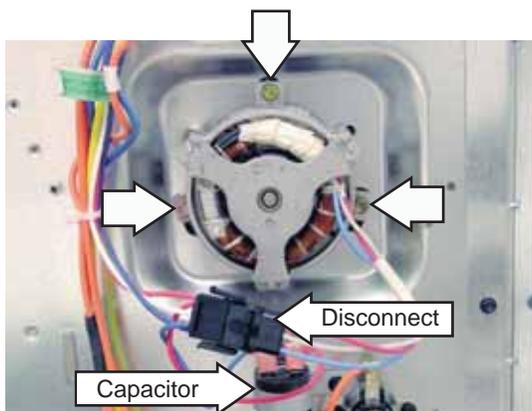
There is a 2.5  $\mu\text{f}$  run capacitor connected across the CW and CCW windings of the convection fan motor. This capacitor provides a phase shift for the change in motor direction. An open or shorted capacitor will stop the motor.

The convection fan motor has approximate resistance values between the following wires:

- Red and Blue: 167  $\Omega$
- Red and Gray: 76  $\Omega$
- Blue and Gray: 91  $\Omega$

To remove the convection fan motor assembly:

1. Remove convection fan blade. (See **Convection Fan Blade and Motor**.)
2. Remove the oven from the installation. (See **Oven Removal**.)
3. Remove the rear access panel. (See **Rear Access Panels**.)
4. Disconnect the convection fan motor wire harness.
5. Remove the three 1/4-in. hex-head screws that hold the convection fan motor to the back of the oven.



## Convection Bake Element

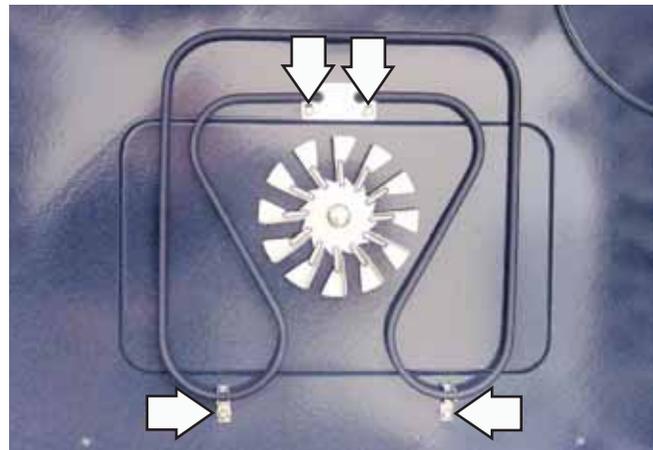
**Note:** The resistance of this component can be tested from the EOC. (See **Control Board Testing**.)

The element is rated at 2500 watts, has an approximate resistance value of 22  $\Omega$ , and draws approximately 10.6 amps.

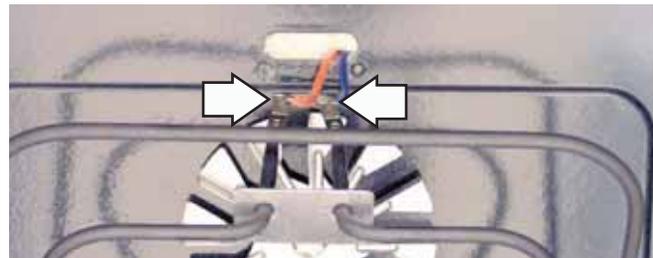
The convection bake element is located on the back wall of the oven and can be removed from inside the oven cavity.

To remove the convection bake element:

1. Disconnect the power from the oven and remove the oven racks.
2. Remove the four 1/4-in. hex-head screws that hold the convection cover to the back wall of the oven cavity.
3. Remove the four 1/4-in. hex-head screws that hold the convection bake element to the back wall of the oven cavity.



4. Carefully pull the convection bake element towards the front of the oven until the element terminals are accessible.



5. Disconnect the wires from the convection bake element.

## Logic Board

To remove the logic board on single or double ovens:

1. Gain access to the control compartment. (See **Control Compartment Access**.)
2. Mark and disconnect the wires from the logic board.
3. Remove the 4 hex-head screws from the logic board.

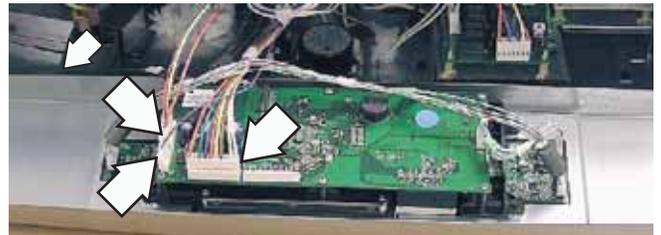


## Relay and Power Boards

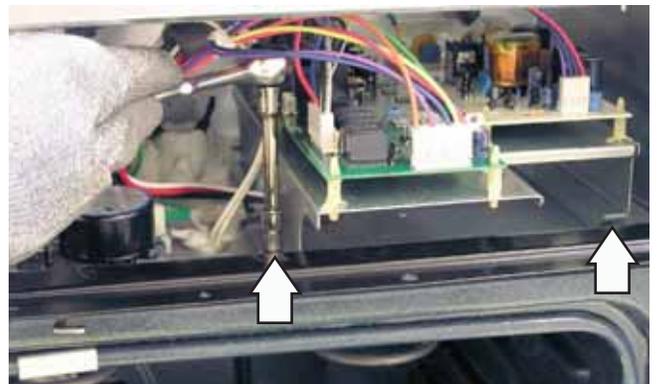
The relay board and the power board in the single and upper ovens are located in the right side of the control compartment and are accessed through the control compartment.

To remove the relay board (single or top oven):

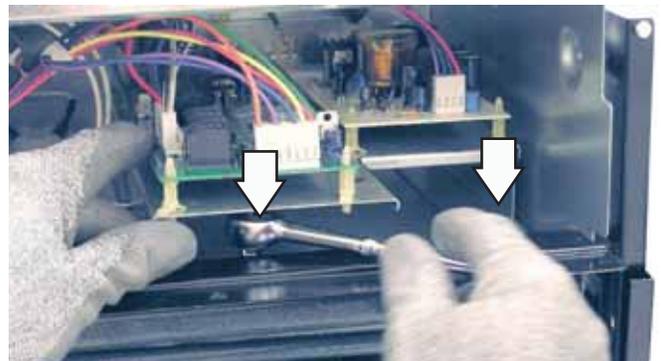
1. Access the control compartment. (See **Component Compartment Access**.)
2. Disconnect, from the logic board, the 3 wire harnesses and the ground wire leading into the control compartment. Remove the control panel and set it aside on a protected surface.



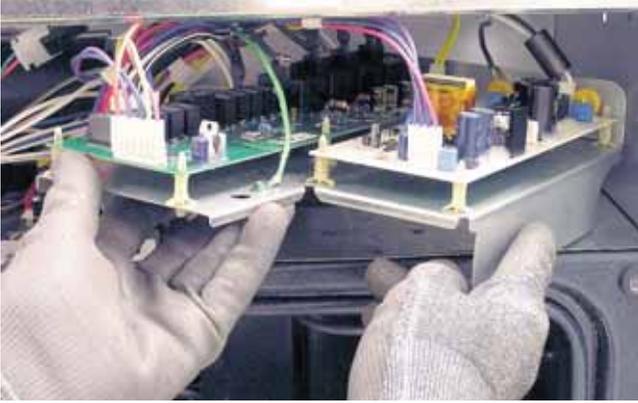
3. Remove the two 1/4-in. hex-head screws from the relay and power board tray.



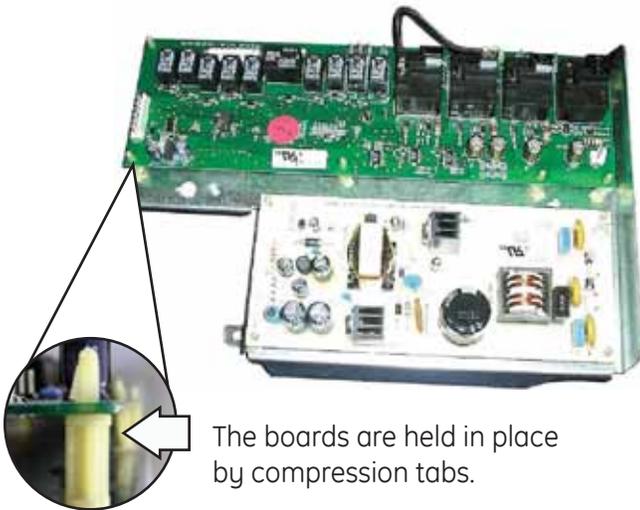
4. Remove the four 1/4-in. hex-head screws (2 on each side) from the vent trim and remove the vent trim.



- Lift the left rear corner of the tray over the wire tie and pull the tray forward and clockwise.



- Mark and disconnect all connectors from the relay board and the power board.
- Compress the tab on top of each plastic standoff; then lift the board.

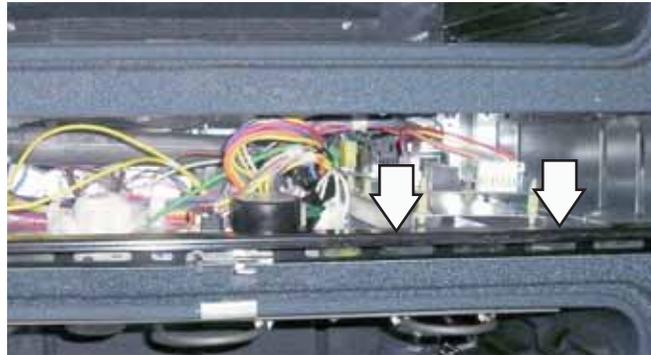


## Lower Oven (Double Wall Oven)

The relay board for the lower oven in a double wall oven is located in the area between the two ovens.

To remove the relay board (lower double wall oven):

- Access the lower oven control compartment. (See **Lower Oven Control Compartment Access.**)
- Remove the two 1/4-in. hex-head screws from the relay board tray.



- Remove the four 1/4-in. hex-head screws (one under the relay board) that attach the vent trim to the front of the cabinet. Remove the trim.



- Pull the tray forward and mark and disconnect all connectors from the relay board.
- Compress the tab on the top of each plastic standoff; then remove the board.

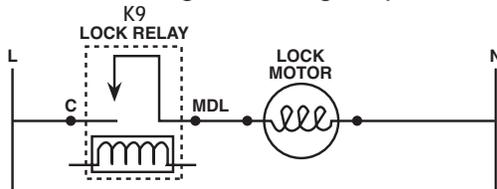
## Lock Assembly

The motorized door lock assembly is located above the oven. The assembly consists of a lock motor cam and switch assembly, lock hook, mounting plate, door switch, spring, and plunger.

The lock motor is energized when the control is set for Clean and Clean Time is selected. The K9 relay contact will close and complete the circuit that supplies the voltage to the lock motor.

| SINGLE/UPPER OVEN                  |           |                  |
|------------------------------------|-----------|------------------|
| CIRCUIT                            | TERMINALS | OHMS             |
| Oven Sensor                        | 9 to 10   | 1091Ω @ Rm Temp. |
|                                    |           | 1654Ω @ 350°F    |
|                                    |           | 2634Ω @ 865°F    |
| Door Latched                       | 5 to 6    | 0Ω               |
|                                    | 4 to 6    | open             |
| Door Unlatched                     | 4 to 6    | 0Ω               |
|                                    | 5 to 6    | open             |
| LOWER OVEN (Double Wall Oven Only) |           |                  |
| CIRCUIT                            | TERMINALS | OHMS             |
| Oven Sensor                        | 9 to 10   | 1091Ω @ Rm Temp. |
|                                    |           | 1654Ω @ 350°F    |
|                                    |           | 2634Ω @ 865°F    |
| Door Latched                       | 4 to 5    | 0Ω               |
|                                    | 3 to 5    | open             |
| Door Unlatched                     | 3 to 5    | 0Ω               |
|                                    | 4 to 5    | open             |

### Door Locking/Unlocking Strip Circuit



The lock motor has approximate resistance value of 1.9K Ω.

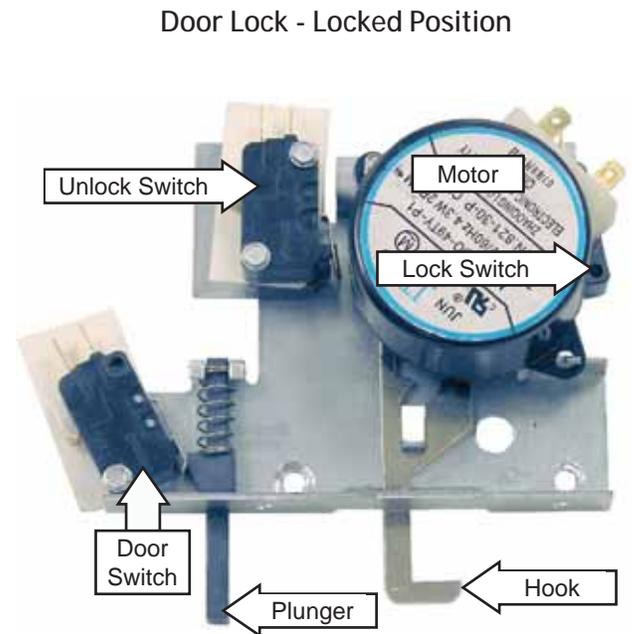
#### Note:

- To enable proper operation of the door lock, ensure that the door jamb switch is in "common" to "normally closed" (door closed). This enables power to be delivered when the door lock closes.
- Display of control will flash "LOCKED" if the door switch is in the "C" (common) to "NC" (normally open) position (door open).
- The word "LOCKED" will flash on and off in the display while the lock motor is in motion. When the door is locked, the word "LOCKED" remains illuminated in the display.

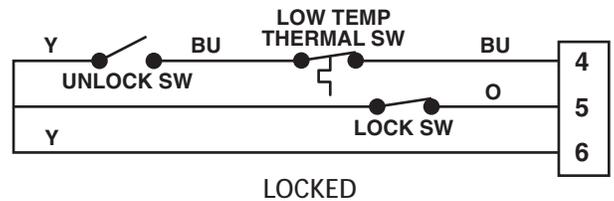
The cam on the motor performs two functions:

- Positions the lock hook in the door to prevent opening during clean operation.
- Operates the lock switches, which signal the control if the door is unlocked or locked and ready for clean operation.

**Note:** When door is either being locked or unlocked, both the lock and unlock switches will be in the open position. The locked and unlocked diagrams are representative of a single/upper oven but apply also to a lower oven.



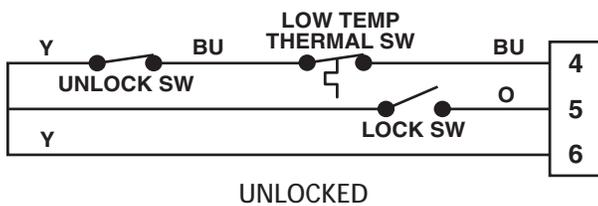
### Strip Circuit



## Door Lock - Unlocked Position



Strip Circuit

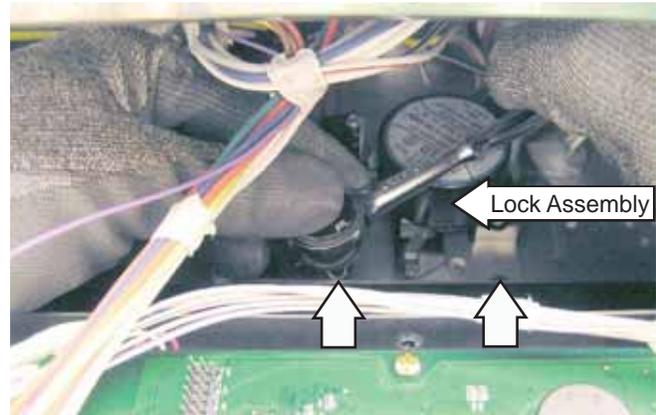


To remove the lock assembly on single and upper double ovens:

1. Access the control compartment. (See **Control Compartment Access**.)
2. Hold control panel and open oven door.
3. Place the control panel on a protected oven door as shown.



4. Mark and disconnect connectors from the lock assembly.
5. Remove 2 hex-head screws and the lock assembly from the oven.



**Caution:** It is possible to reconnect the switch wiring incorrectly to the lock assembly. When reconnecting the wiring, make sure it is properly connected to the lock assembly before turning the power back on.

To remove the lock assembly on lower double ovens:

1. Access the lower control compartment. (See **Lower Oven Control Compartment Access**.)
2. Open lower oven door.
3. Remove 2 Phillips-head screws from the door lock assembly.



4. Mark and disconnect connectors from the lock assembly.

**Caution:** It is possible to reconnect the switch wiring incorrectly to the lock assembly. When reconnecting the wiring, make sure it is properly connected to the lock assembly before turning the power back on.

## Thermal Switches

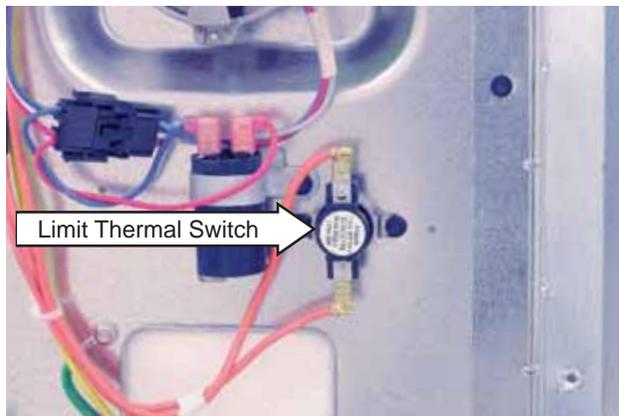
### Limit Thermal Switch

The high limit thermal switch is wired in series with the common side of all the elements, which are tied to the common side of the double line bake relay. This limit switch opens at 284°F and closes when the temperature cools below 254°F. This switch is used to protect against element runaway. The symptom of this switch being tripped is the elements will not work for any operation.

#### To remove the limit thermal switch:

The high limit thermal switch is located on the back side of the wall oven (See **Component Locator Views**).

1. Remove the wall oven from installation. (See **Oven Removal**.)
2. Remove the appropriate rear access panel.
3. Disconnect wires, remove two 1/4-in. hex-head screws and the thermal switch.



### Low Voltage High Temperature Thermal Switch

The clean FAD thermal switch is active during all operations. If the thermal switch opens in any cook mode of operation, the fault code screen will show -F9- failure code. When this condition exists, check the fan operation (look for obstructions), inspect oven installation (make sure grille areas are not blocked), and oven insulation.

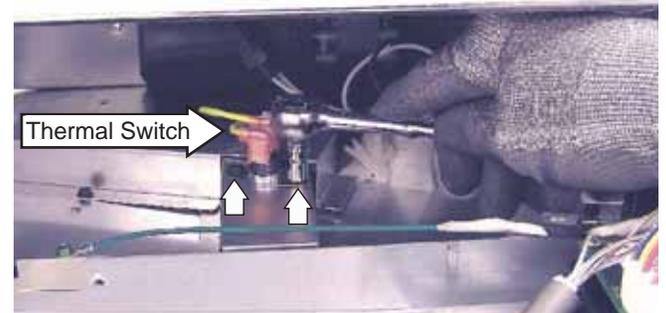
The clean FAD thermal switch for single ovens or upper double ovens is mounted to the oven exhaust duct located in the component compartment in front of the fan motor. It is wired directly to the relay board. This limit switch opens at 240°F and closes when the temperature cools below 190°F.

The lower double oven clean FAD thermal switch is riveted to the lower oven vent trim. It opens at 250°F and closes when the temperature cools below 220°F.

**Note:** The following is an indication of an open clean FAD: A cooking mode is selected. When START is pushed, the control displays "F9 – FAD ERROR DETECTED – MODE CANCELED" then returns to home.

#### To remove the clean FAD thermal switch on single and upper double ovens:

1. Access the control compartment. (See **Access Control Compartment**.)
2. Remove two 1/4-in. hex-head screws and the thermal switch.



3. Disconnect the 2 wires from the thermal switch.

**Note:** To remove the clean FAD thermal switch on lower double ovens see the lower oven section of **Relay and Power Boards**.

### Low Voltage Low Temperature Thermal Switch

The bake FAD switch is active only during non-self-clean (unlock switch closed, lock switch open) operations.

The bake FAD thermal switch for single ovens or upper double ovens is located under the rear top cover in front of the cooling fan. It is wired in series with the unlock motor switch.

The bake FAD thermal switch for lower double ovens is located in the lower oven control compartment. It is wired in series with the unlock motor switch.

The values for these thermal switches are:

|              | OPEN  | CLOSE |
|--------------|-------|-------|
| Single Oven  | 205°F | 177°F |
| Double Upper | 205°F | 177°F |
| Double Lower | 240°F | 190°F |

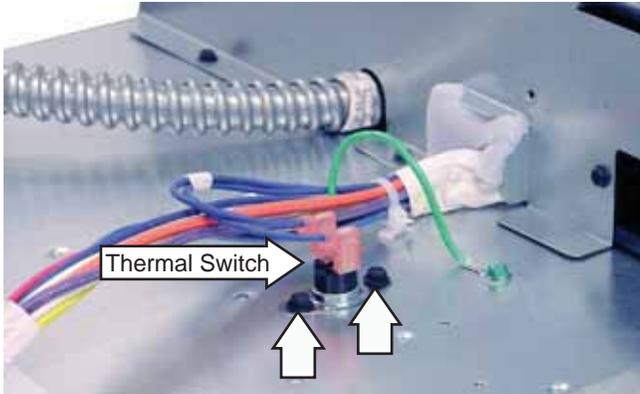
**Note:** The following is an indication of an open bake FAD: A cooking mode is selected. When START is pushed, the status screen displays "DONE" then reverts back to the home menu. The lock motor continues to run while seeking the "Unlocked" position.

*(Continued Next Page)*

To remove the bake FAD thermal switch on single and upper double ovens:

The bake FAD thermal switch is located on the back top side of the wall oven. (See **Component Locator Views**).

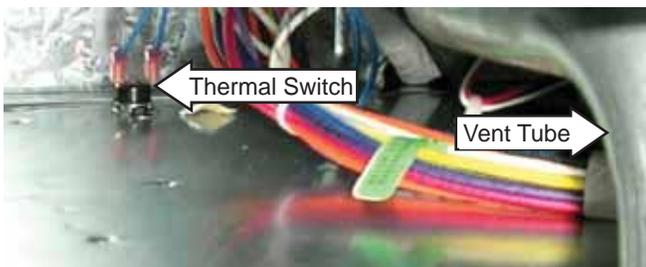
1. Remove the wall oven from installation. (See **Oven Removal**.)
2. Remove the back, top side access panel.
3. Disconnect wires; remove two 1/4-in. hex-head screws and the thermal switch.



To remove the bake FAD thermal switch on lower double ovens:

The bake FAD thermal switch for lower double ovens is located in the lower oven control compartment behind the vent tube. (See **Component Locator Views**).

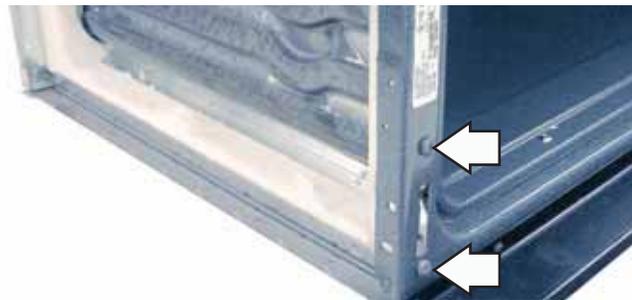
See **Lower Oven Control Compartment Access** to gain access to the lower oven control compartment. The bake FAD thermal switch is held in place by two 1/4-in. hex-head screws.



## Door Hinge Receivers

To remove the door hinge receivers:

1. Remove the oven from the installation. (See **Oven Removal**.)
2. Remove the appropriate side access panel for the door hinge receiver. (See **Side Access Panels**.)
3. Carefully lift the insulation from the outside of the oven.
4. Remove the four T-15 Torx screws (2 on each side) that hold each hinge receiver to the oven frame.



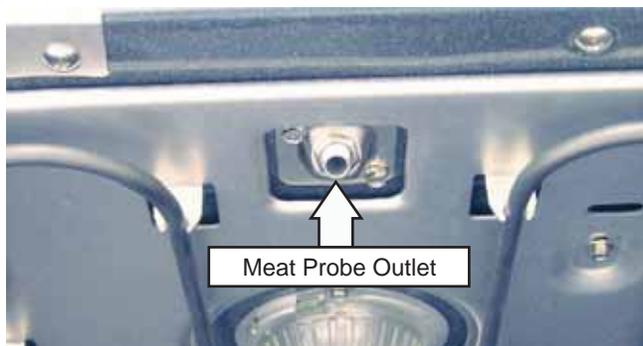
**Note:** Upon reassembly, ensure displaced insulation around oven and components is returned to its original position.

## Meat Probe and Outlet

If equipped, the meat probe outlet is located on the top of the oven cavity, near the front. The meat probe outlet is connected to the electronic oven control. The meat probe has a resistance value of 30K-50K  $\Omega$  at room temperature.

To remove the meat probe outlet:

1. Open the oven door.
2. Remove the two ¼-in. hex-head screws that hold the meat probe outlet to the top of the oven cavity.
3. Remove the control panel (see **Control Compartment Access**) and disconnect the meat probe connector.
4. Pull the probe outlet wiring through the meat probe outlet.



**Note:** Upon reassembly, ensure displaced insulation around oven and components is returned to its original position.

## Bake Element

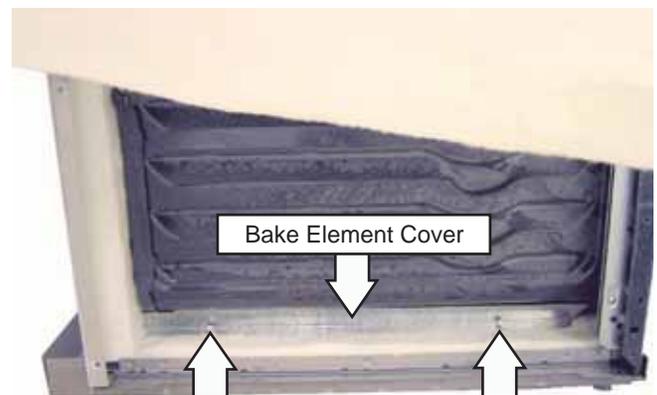
**Note:** The resistance of this component can be tested from the EOC. (See **Control Board Testing**.)

The element is rated at 2100 watts, has an approximate resistance value of 27  $\Omega$ , and draws approximately 8.5 amps.

The bake element is located under the oven floor. Bake element terminals are located behind the rear access panels on both the single and double wall ovens.

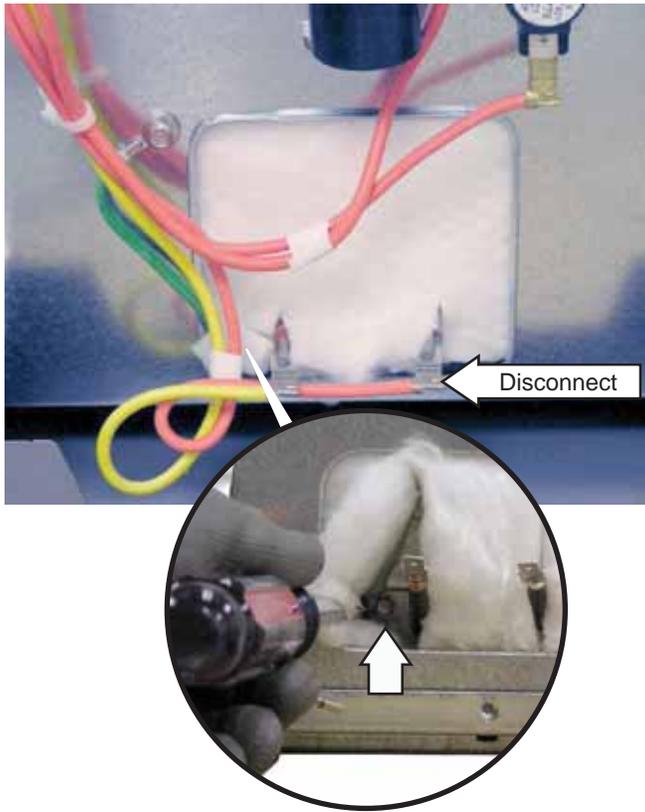
To remove a bake element:

1. Remove the oven from the installation. (See **Oven Removal**.)
2. Remove the left side access panel for the appropriate bake element. (See **Side Access Panels**.)
3. Carefully lift the insulation from the outside of the oven to access the screws that hold the bake element cover in place.
4. Remove two ¼-in hex-head screws and the bake element cover from oven.

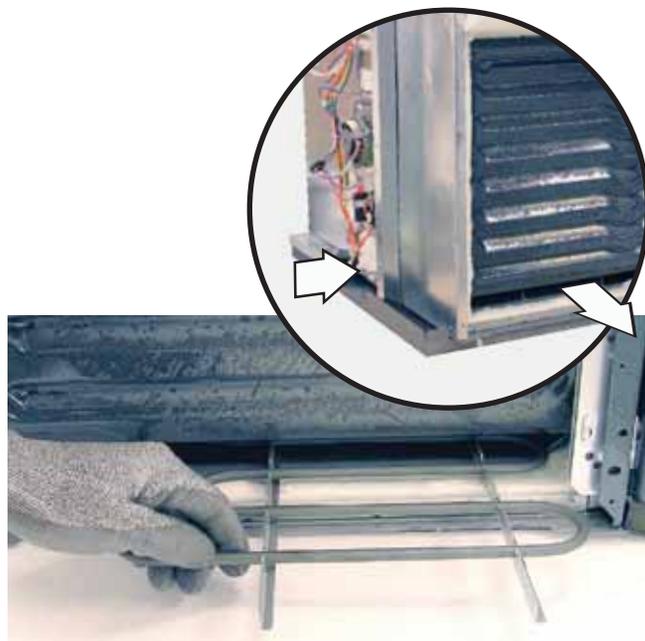


5. Remove 1/4-in. hex-head screws and bake element terminal cover from oven.
6. Disconnect the wires from the bake element.

7. Carefully move the insulation to access and remove the two 1/4-in hex-head screws (one on each side of terminals) that hold the bake element to the oven.



8. Grasp and pull the element out from the left side of the oven by moving the element to the front of the oven to clear the terminal ends.



**Note:** Upon reassembly, ensure displaced insulation around oven and components is returned to its original position.

## Cooling Fan

A cooling fan is controlled by the logic board and is located above each oven. On upper and single ovens, the cooling fan is in the rear wall on the left side of the control compartment. On lower ovens, the cooling fan is located on the right side of the back wall in the lower control compartment. On double ovens, both fans operate together.

The fans will begin to operate when the oven is in any cooking mode. The fans may continue to operate even after the oven is turned off.

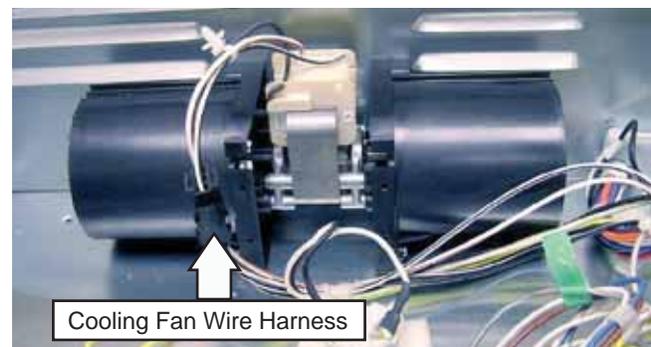
The fan motor in the single or upper oven, and the fan motor in the lower oven is a 2-speed motor. Fan speed is controlled by the microswitch on the door lock: Locked = high speed and unlocked = low speed. The cooling fans have the following approximate resistance values:

|                          | Single or Upper Oven | Lower Oven  |
|--------------------------|----------------------|-------------|
| White/red to white/black | 13 $\Omega$          | 10 $\Omega$ |
| Black to white/black     | 18 $\Omega$          | 21 $\Omega$ |
| White/red to black       | 30.7 $\Omega$        | 31 $\Omega$ |

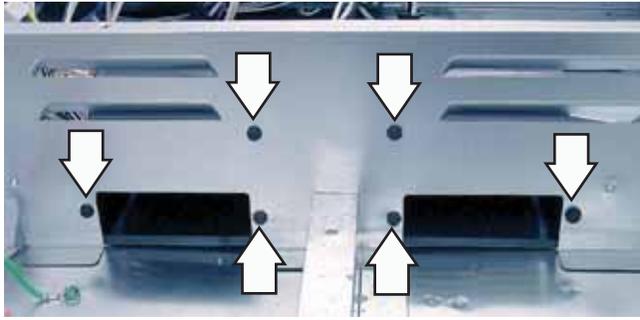
Access to the single and upper oven cooling fans and the lower oven cooling fan require the oven to be removed.

To remove the cooling fan in the single and upper oven:

1. Remove the oven from the installation. (See **Oven Removal**.)
2. Remove the top access panels. (See **Top Access Panels**.)
3. Disconnect the cooling fan wire harness.

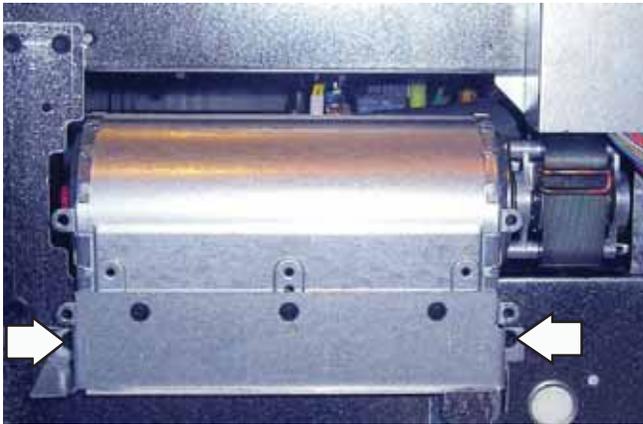


- Remove the six 1/4-in. hex-head screws that hold the cooling fan to the oven and remove the cooling fan

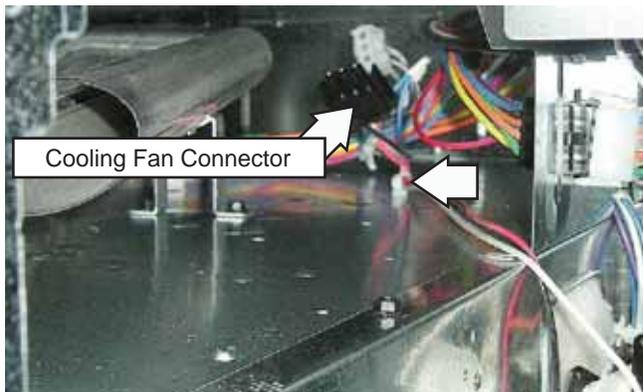


To remove the cooling fan in the lower oven:

- Remove the oven from the installation. (See *Oven Removal*.)
- Remove the two 1/4-in. hex-head screws that attach the cooling fan to the rear chassis wall and lower the cooling fan.



- Disconnect the cooling fan wire harness; then cut the wire tie and remove the cooling fan.



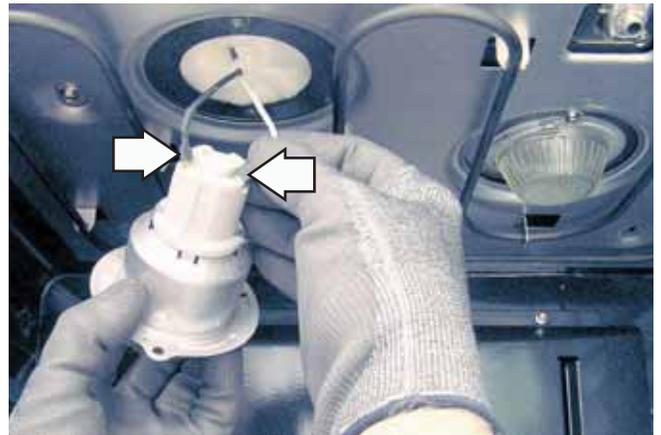
## Oven Light Assembly

The ovens have two light assemblies in each oven cavity. The incandescent light assemblies are located on the top of the oven. The oven door switch monitors the position of the oven door and provides this information to the EOC. The lights come on when the door is opened. The oven lights do not come on if the Sabbath Feature is set.

Each light assembly consists of a removable light cover, a light bulb socket, and a 40 watt incandescent light bulb.

To remove an oven light assembly:

- Disconnect power to the oven.
- Open the oven door.
- Remove the two 1/4-in. hex-head screws that attach the light housing to the oven liner.
- Pull the oven light housing from the oven liner.
- Disconnect the wires from the light housing.



# Electronic Oven Control

## Overview

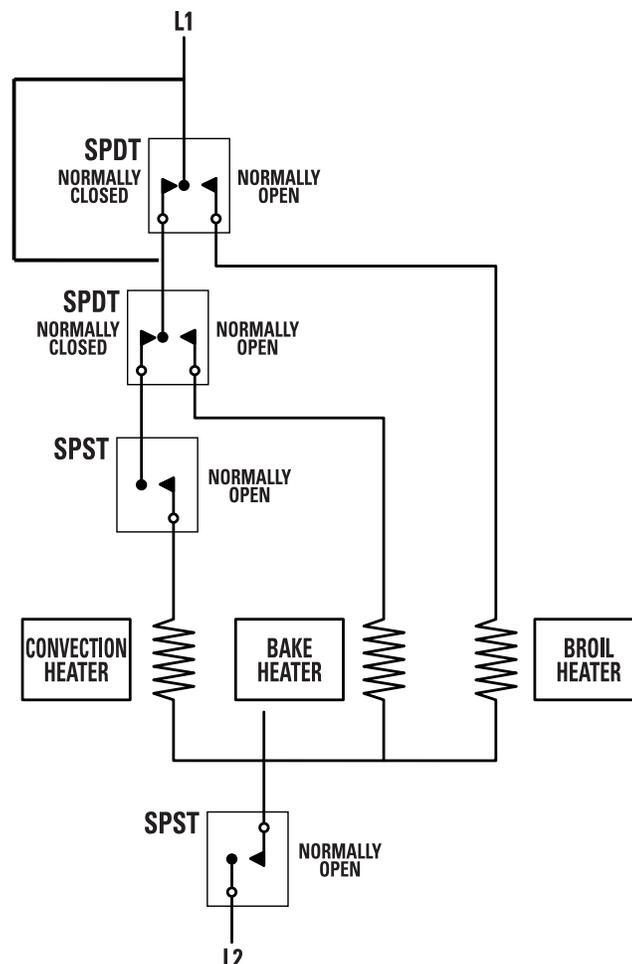
The Electronic Oven Control (EOC) system consists of the glass touch board, logic board, power board, relay board(s), oven sensor, and door lock assembly.

**Caution:** Components are electrically HOT on control when voltage is connected to range.

## Note

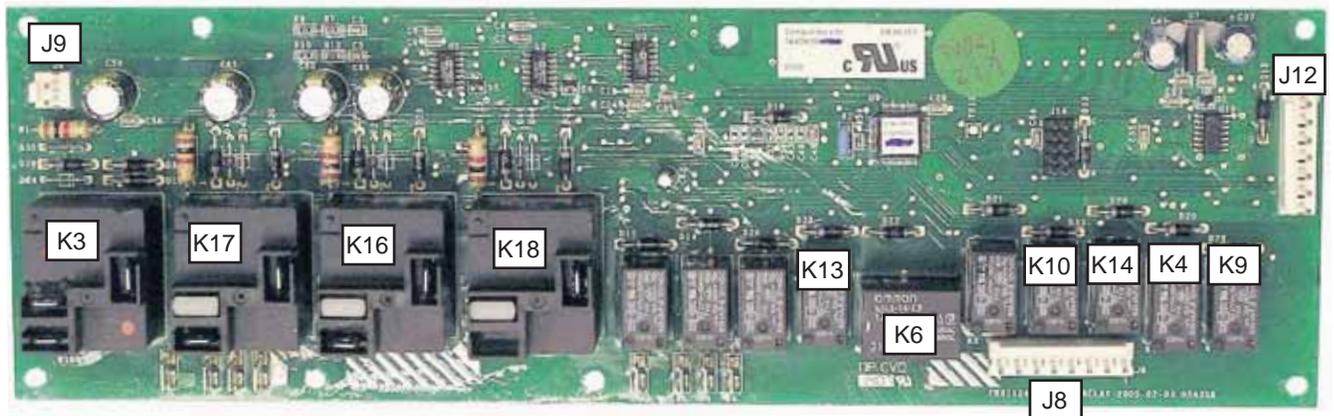
- Voltage must be present across terminals L1 and N for control to operate.
- Temperature/Mode Selection necessary for operation of relay contacts.
- Bake and broil units can be on at the same time.
- Bake and broil units operate simultaneously during preheat. Broil unit is on approximately 25 percent of the time during the balance of the bake operation. There is approximately 1 minute of off time between bake and broil unit operation after preheat.
- In the clean cycle, the broil unit is only on during the first 30 minutes or until the oven reaches 750°F. During the balance of the clean operation, the oven will use the bake and broil units simultaneously and separately, with 1 second of off time between units while calling for heat.

## Oven Circuits



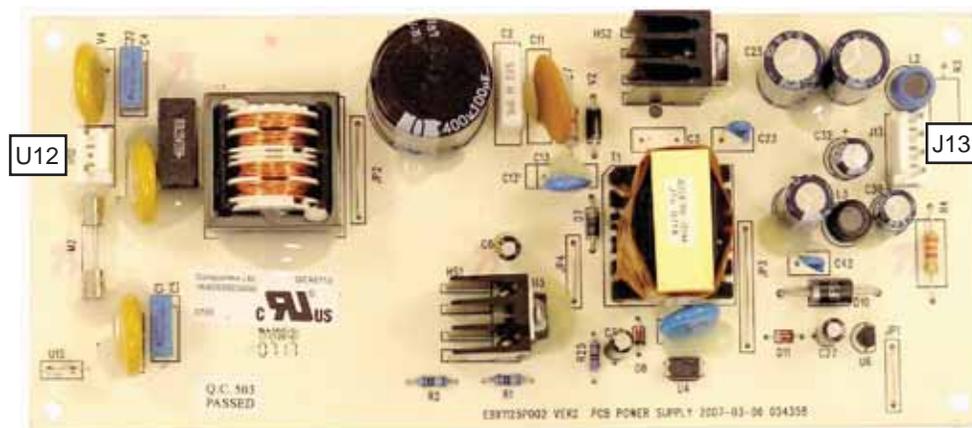
## Relay Board

Note: There is one relay board for each oven.



|     |   |     |                    |
|-----|---|-----|--------------------|
| J8  | Convection Fan, Cooling Fan, Oven Light, Lock Motor | K9  | Lock Motor         |
| J9  | Clean FAD Thermal                                   | K10 | Cooling Fan        |
| J12 | 12V, Linbus, Gnd (DC), -14V, Door Lock Enable       | K13 | Convection Fan     |
| K3  | DLB   | K14 | Cooling Fan        |
| K4  | Light   | K16 | Bake Element       |
| K6  | Convection Fan Direction                            | K17 | Broil Element      |
|     |   | K18 | Convection Element |

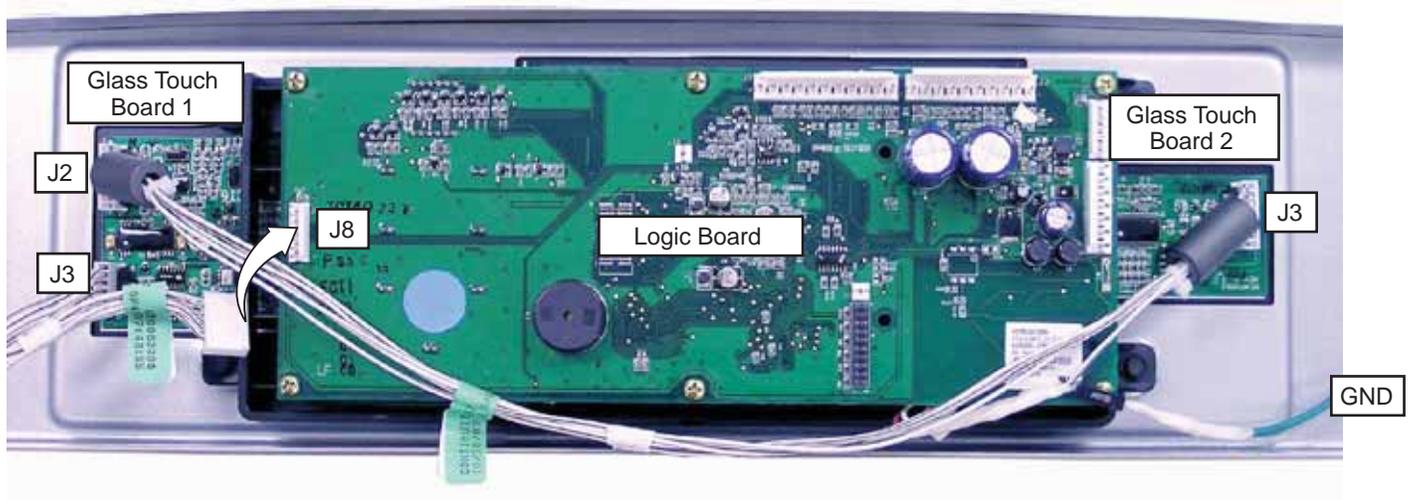
## Power Board



|     |   |
|-----|---|
| U12 | L1 Supply to Power Board                |
| J13 | 12V, -14V, and Gnd (DC) to Relay Boards |

## Glass Touch Boards

(Shown with Logic Board)

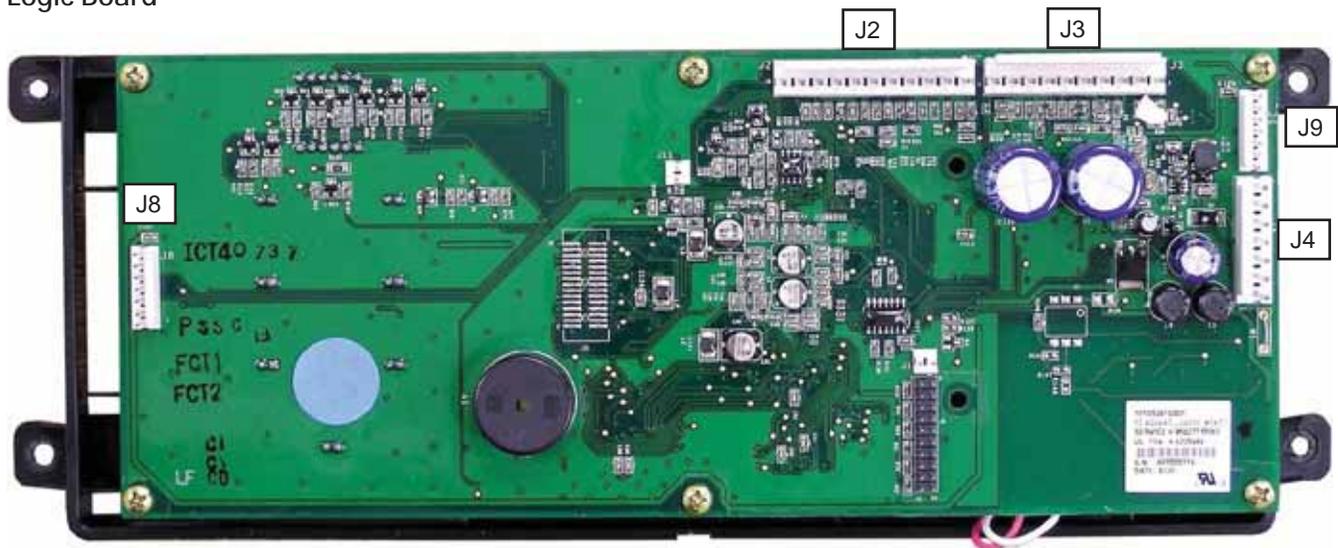


J2 Ferrite Wire Harness to J3 on Glass Touch Board 2

J3 Wire Harness to J8 on Logic Board

**Note:** The glass touch boards and the control panel front are one unit and are ordered as an assembly.

## Logic Board



J2 Lower Oven: Door Lock Motor Switch, Temperature Sensor, and Meat Probe

J3 Single/Upper Oven: Door Lock Motor Switch, Temperature Sensor, and Meat Probe

J4 12 V and GND DC from Power Supply Board; Door Lock Enable; 12 V, GND DC, Linbus

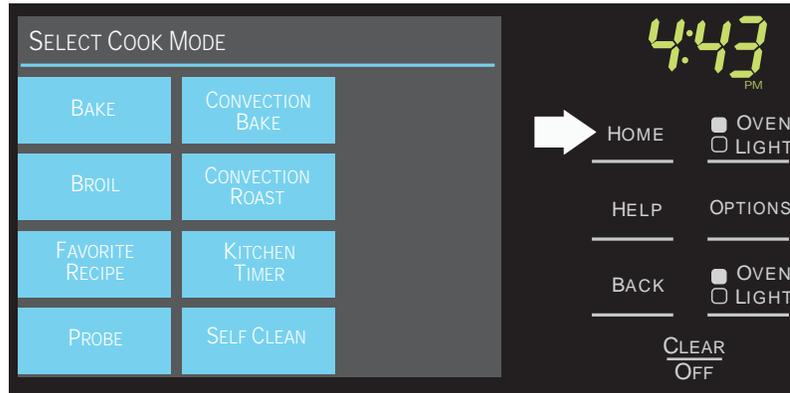
J8 To Glass Touch Boards

J9 To Door Lock Common

# Diagnostics and Service Information

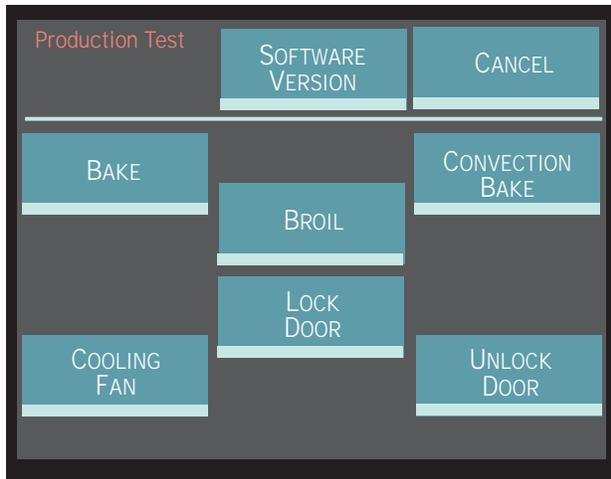
## Factory Test Mode

The factory test mode can only be accessed during the first 5 minutes after the unit is powered up. To access the factory test mode, press the following keys in sequence (press and release each key one at a time) within the first 5 minutes of operation: **Home**, **Help**, **Back**, **Oven Light**, and **Options**. These keys are on the fixed keypad just to the right of the LCD screen.

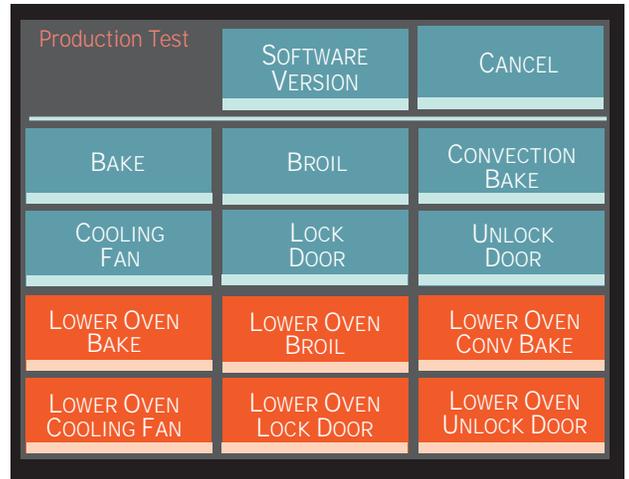


Once the factory test mode is entered, all loads can be actuated via the Factory Test Mode LCD screen.

### Single Wall Oven Display



### Double Wall Oven Display



To exit factory test mode, cycle power on the unit.

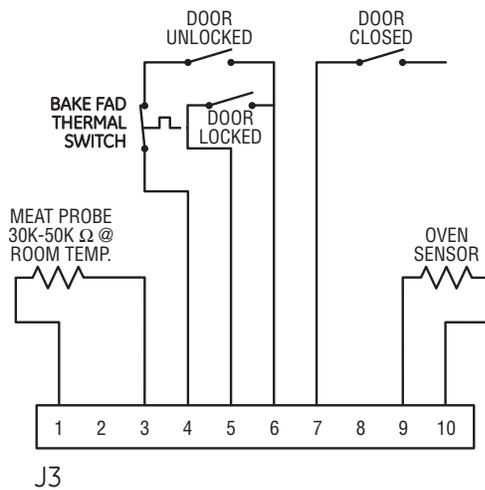
## Oven Sensor and Door Switch Test

Note: See **Lock Assembly** for door switch function explanation.

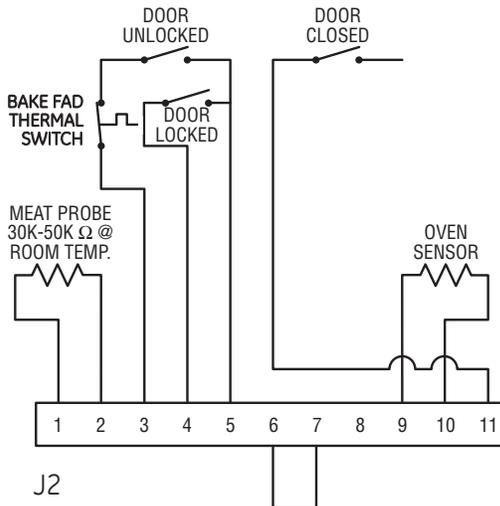
1. Remove power from oven.
2. Make resistance measurement from side of sensor and lock switch connector with exposed terminals.
3. The resistance measurements are made on the logic board at the connector listed on the chart below.
4. If abnormal reading is observed, wiggle leads at disconnect block. If any variation occurs, replace.

| Resistance Measurement Chart        |                |           |                  |   |
|-------------------------------------|----------------|-----------|------------------|---|
| Models                              | Circuit        | Connector | Terminals        | Ohms  |
| PT920<br>and<br>PT960<br>Upper Oven | Oven Sensor    | J3        | 9 to 10          | 1091 $\Omega$ @ Rm. Temp.<br>1654 $\Omega$ @ 350°F<br>2634 $\Omega$ @ 865°F |
|                                     | Door Latched   | J3        | 5 to 6<br>4 to 6 | 0 $\Omega$<br>open  |
|                                     | Door Unlatched | J3        | 4 to 6<br>5 to 6 | 0 $\Omega$<br>open  |
| PT960<br>Lower Oven<br>Only         | Oven Sensor    | J2        | 9 to 10          | 1091 $\Omega$ @ Rm. Temp.<br>1654 $\Omega$ @ 350°F<br>2634 $\Omega$ @ 865°F |
|                                     | Door Latched   | J2        | 4 to 5<br>3 to 5 | 0 $\Omega$<br>open  |
|                                     | Door Unlatched | J2        | 3 to 5<br>4 to 5 | 0 $\Omega$<br>open  |

Single and Upper Oven



Lower Oven



## ERC Failure Codes

Failure Codes are accessed by pressing and holding the HOME and OPTIONS keys simultaneously for 3 seconds. The LCD screen will show the last 7 failure codes logged by the system. For a double wall oven, failure codes for each cavity are displayed independently on the screen. The clear KEY at the bottom of the screen can be pressed to clear the failure code log.

- The F codes are stored in nonvolatile eeprom memory. They do not show on the display for the customer.
- The last 7 F codes can be recalled by pressing together the HOME and OPTIONS keys for 3 seconds.
- All F codes are suppressed.

Last 7 Failure F- Codes :

| Upper 7 Fcode Log | Lower 7 Fcode Log |
|-------------------|-------------------|
| C1                | F9                |
| F3                | CX                |
| F7-S              | F3                |
| F7-S              | F3                |
| F7-S              | CX                |
| F7-S              | F3                |
| F7-S              | CX                |

Clear All

| FAILURE CODE   | MEANING   | CAUSE / CORRECTION  |
|----------------|---|---|
| F2             | Oven temperature inside oven cavity as measured by sensor over 650°F unlatched or 915°F latched.              | <ul style="list-style-type: none"> <li>• Welded relay contacts on the relay board.</li> <li>• Airflow to rear of unit.</li> <li>• High resistance in oven sensor leads and/or connectors (especially at sensor in rear).</li> </ul>   |
| F3             | Open oven sensor (over 2900 Ω)  | <ul style="list-style-type: none"> <li>• Disconnect power. Disconnect sensor harness from control. Measure sensor resistance (white leads) to be 1080 Ω at room temperature with 2 Ω per degree change.</li> <li>• Look for damaged harness terminals if not a bad sensor.</li> </ul> |
| F4             | Shorted oven sensor (under 950 Ω)   | <ul style="list-style-type: none"> <li>• Disconnect power. Disconnect sensor harness from control. Measure sensor resistance (white leads) to be 1080 Ω at room temperature with 2 Ω per degree change.</li> <li>• Separate sensor from harness to determine fault.</li> </ul>        |
| F7             | Shorted key   | Check logic display assembly. If rubber button pad is misaligned, correct; otherwise, replace control.  |
| F8             | EEPROM data shift failure   | If repeated, replace control.   |
| F9             | Cooling fan stalls or other cause of open thermal switch  | Suspect stalled cooling fan or airflow to control area.   |
| CX<br>C1<br>C4 | Communication Error<br>Communication Fail with Upper Relay Board<br>Communication Fail with Lower Relay Board | Check harness first and then replace component indicated by Cx Error Code.  |
| FC             | Door Latch Error  | Inspect door latch and circuitry. Replace if switches are defective.  |

## Control Board Testing

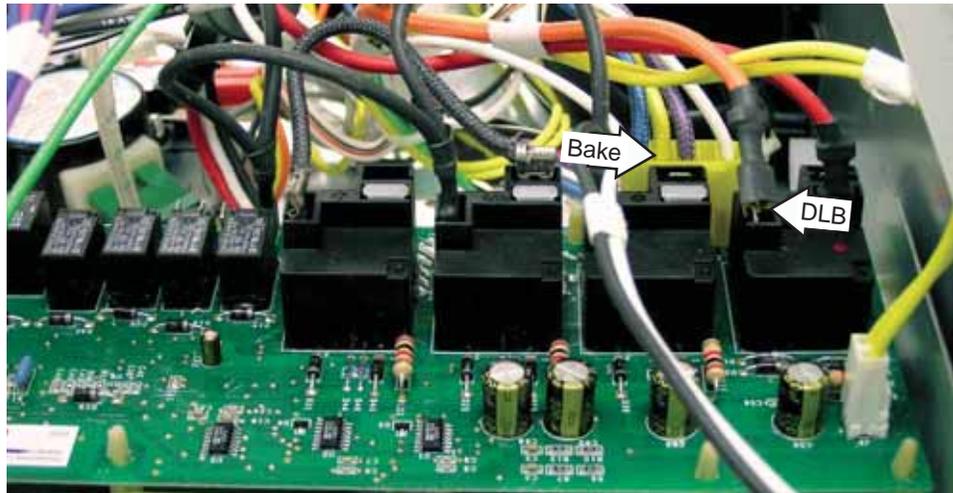
The resistance of various components can be checked from the Electronic Oven Control by the service technician to quickly identify failed or improper operation of certain oven components.

**For better clarity, some boards are shown with the top cover removed.**

**Note:** Colored dots on the relays match the color of the wire.

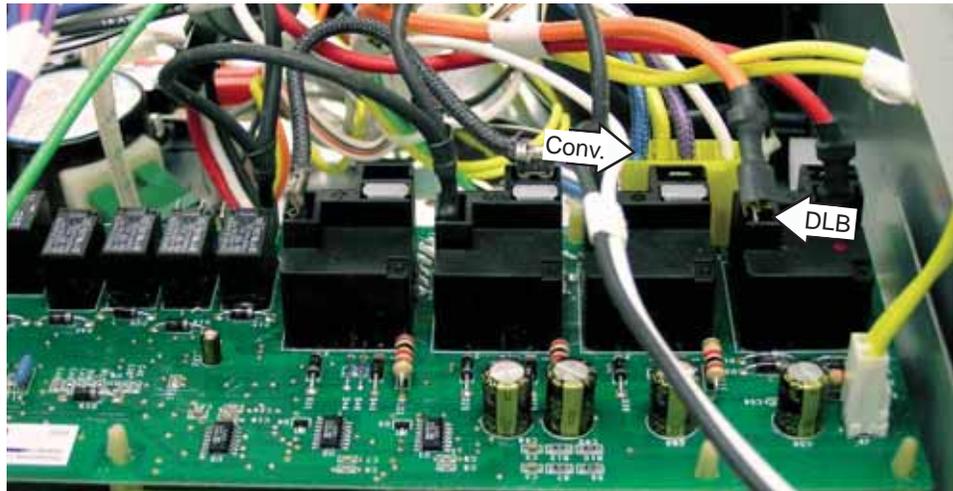
### Hidden Bake Element

To test the hidden bake element from the relay board, disconnect the orange wire at **DLB**. The resistance should read approximately  $27\ \Omega$  between the orange wire at **DLB** and the yellow wire at **BAKE**. (See photo.)



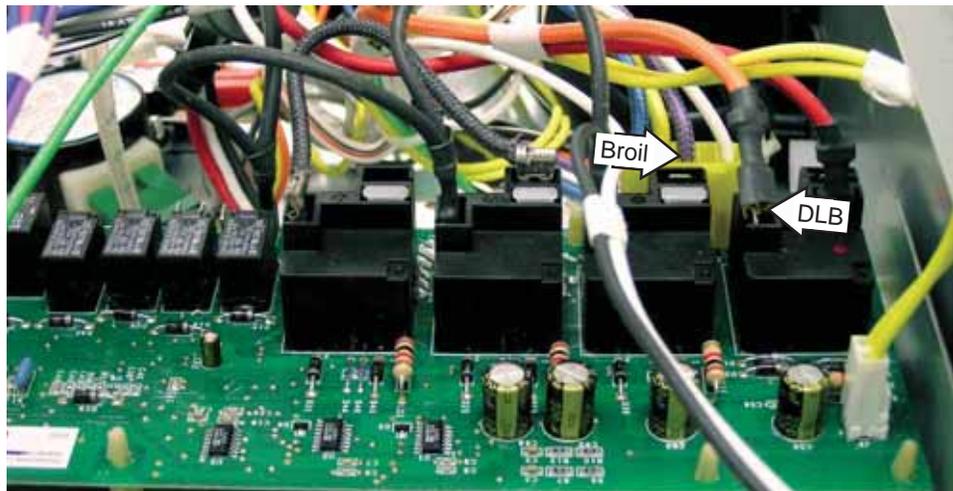
### Convection Element

To test the convection element from the relay board, disconnect the orange wire at **DLB**. The resistance should read approximately  $22\ \Omega$  between the orange wire at **DLB** and the blue wire at **CONV.** (See photo.)



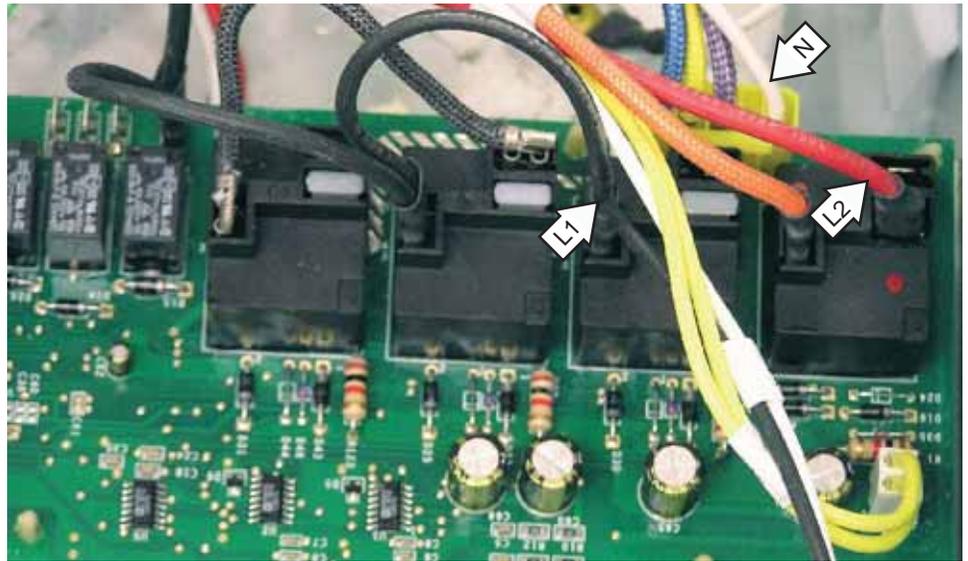
### Broil Element

To test the broil element from the relay board, disconnect the orange wire at **DLB**. The resistance should read approximately  $24\ \Omega$  between the orange wire at **DLB** and the purple wire at **BROIL**. (See photo.)



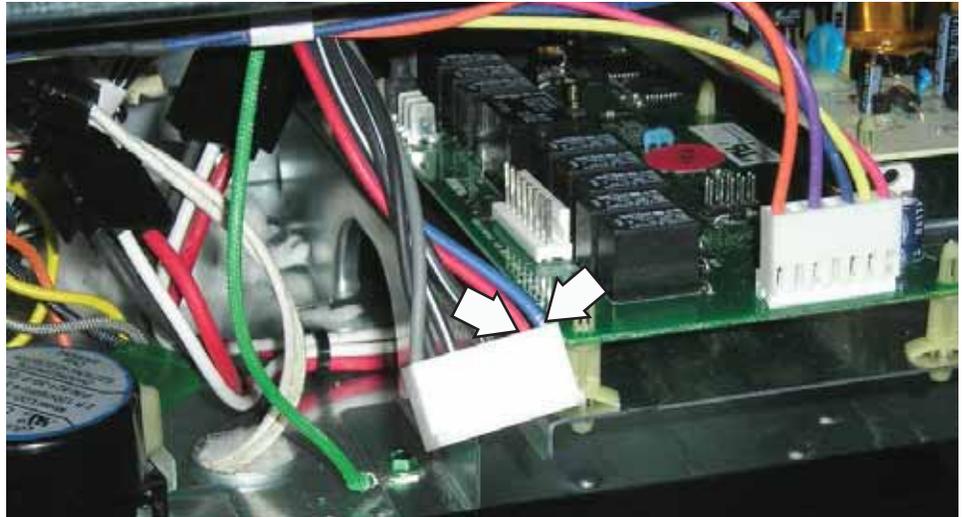
## Line Voltage Testing

To test the line voltage at the relay board, the black wire is L1, The white wire is neutral, and the red wire is L2. The voltage should be approximately 120 VAC between L1 and N and approximately 240 VAC between L1 and L2. (See photo.)



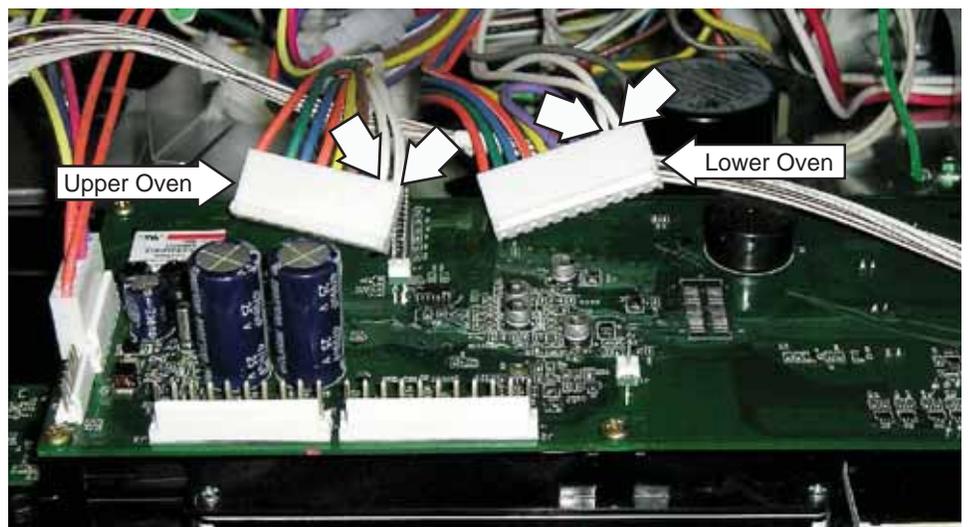
## Convection Fan Motor

To test the convection fan motor from the relay board, disconnect the wire harness at **J8**. The resistance should read approximately 168  $\Omega$  at room temperature between the red and the blue wires at pin 7 and pin 8 on **J8**. (See photo.)



## Sensor

To test the sensor from the logic board, disconnect the wire harnesses at **J2** for single/upper oven and **J3** for lower oven. The resistance should read approximately 1080  $\Omega$  at room temperature between the 2 white wires at pin 9 and pin 10 on **J2** for single/upper oven, and **J3** for lower oven. (Double oven logic board shown.)

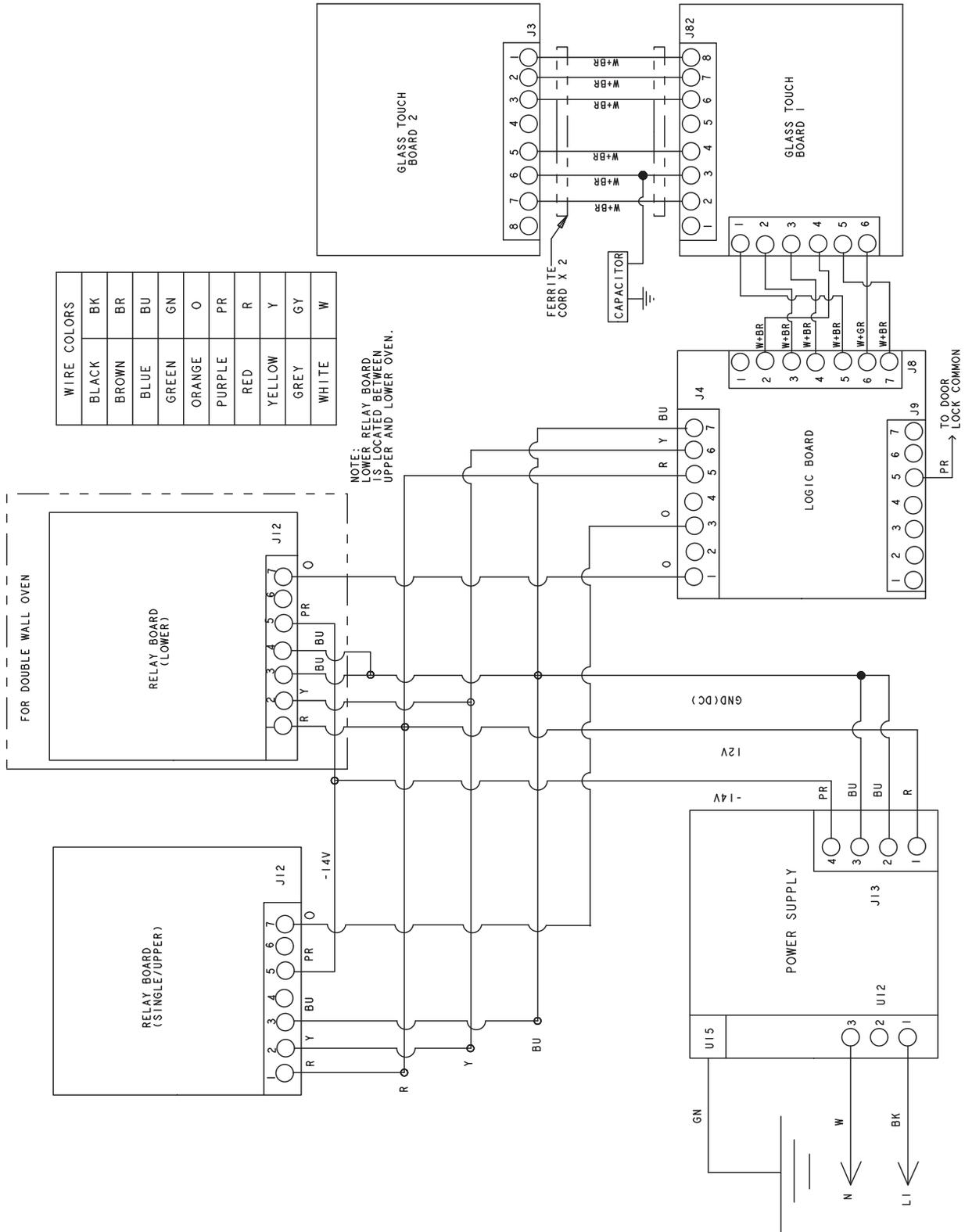


# Schematics and Wiring Diagrams

**WARNING:** Disconnect electrical power before servicing.

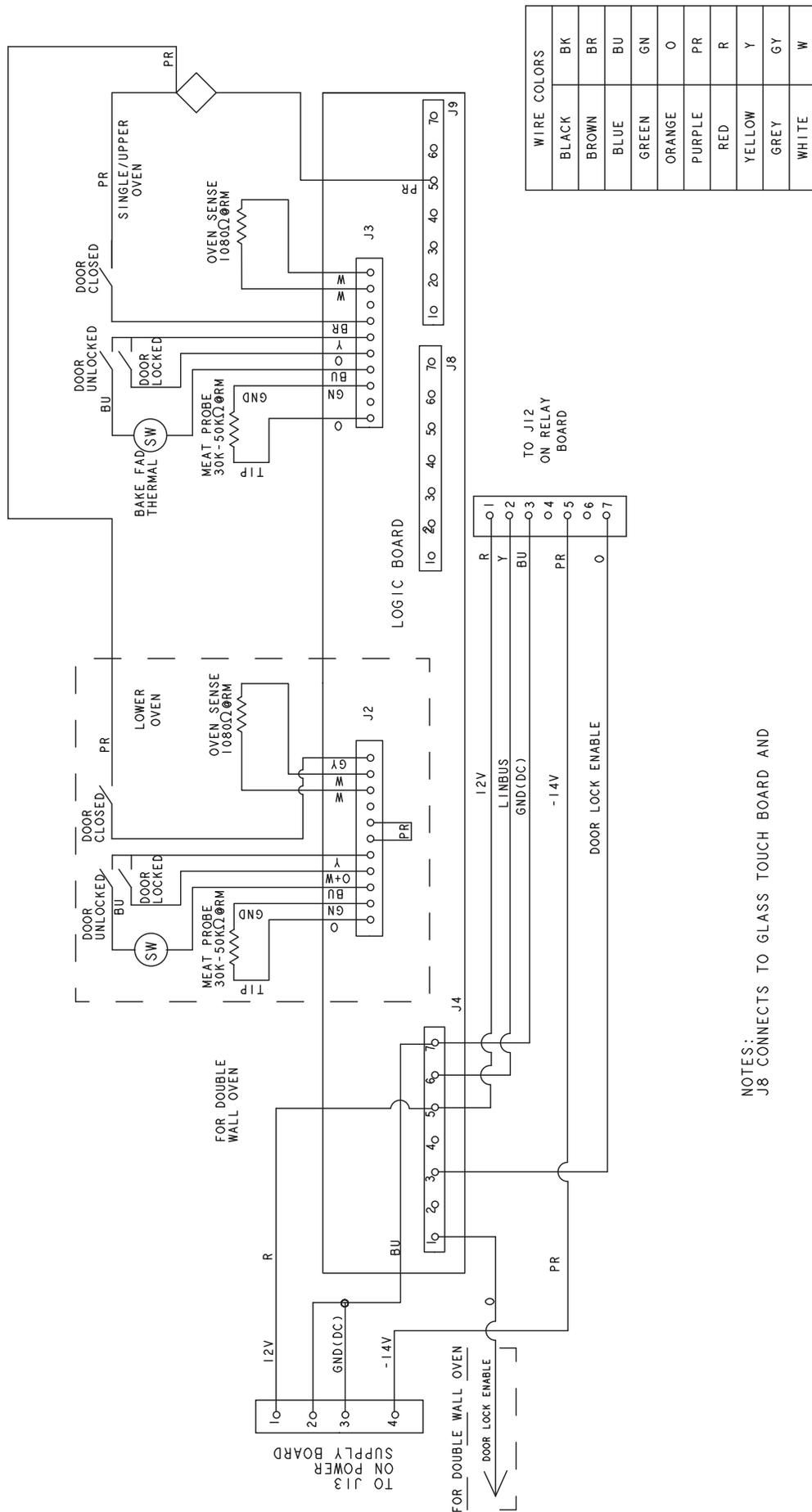
**Caution:** Label all wires prior to disconnection. Wiring errors can cause improper and dangerous operation. Verify operation after servicing.

## PT920 and PT960 Wiring Diagram



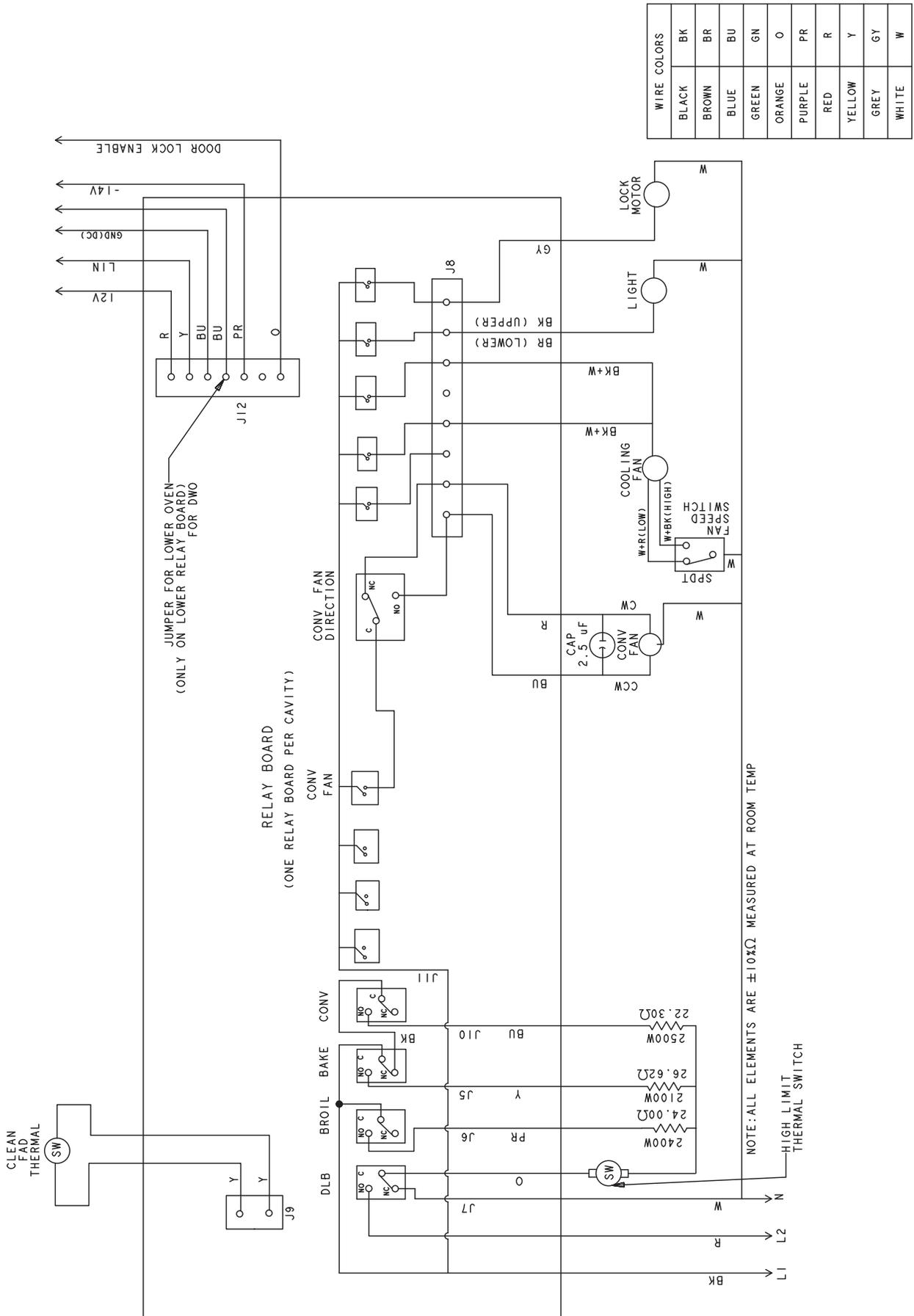
(Continued Next Page)

# Schematic, Logic Board



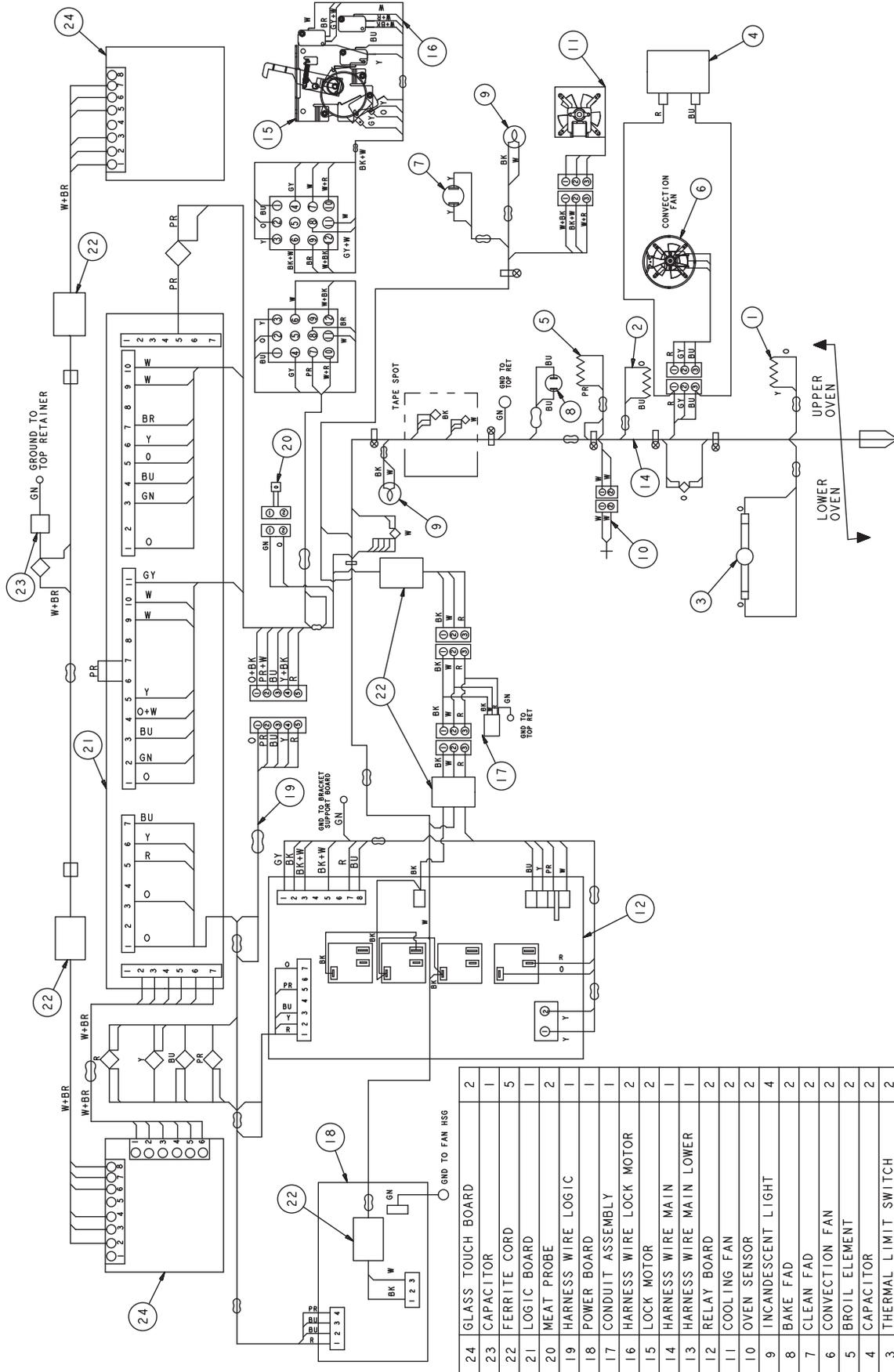
NOTES:  
J8 CONNECTS TO GLASS TOUCH BOARD AND

# Schematic, Relay Board



(Continued Next Page)

# Wiring Diagram, Upper or Single Oven



|      |                         |     |
|------|-------------------------|-----|
| 24   | GLASS TOUCH BOARD       | 2   |
| 23   | CAPACITOR               | 1   |
| 22   | FERRITE CORD            | 5   |
| 21   | LOGIC BOARD             | 1   |
| 20   | MEAT PROBE              | 2   |
| 19   | HARNESS WIRE LOGIC      | 1   |
| 18   | POWER BOARD             | 1   |
| 17   | CONDUIT ASSEMBLY        | 1   |
| 16   | HARNESS WIRE LOCK MOTOR | 2   |
| 15   | LOCK MOTOR              | 2   |
| 14   | HARNESS WIRE MAIN       | 1   |
| 13   | HARNESS WIRE MAIN LOWER | 1   |
| 12   | RELAY BOARD             | 2   |
| 11   | COOLING FAN             | 2   |
| 10   | OVEN SENSOR             | 2   |
| 9    | INCANDESCENT LIGHT      | 4   |
| 8    | BAKE FAD                | 2   |
| 7    | CLEAN FAD               | 2   |
| 6    | CONVECTION FAN          | 2   |
| 5    | BROIL ELEMENT           | 2   |
| 4    | CAPACITOR               | 2   |
| 3    | THERMAL LIMIT SWITCH    | 2   |
| 2    | CONVECTION ELEMENT      | 2   |
| 1    | BAKE ELEMENT            | 2   |
| I.D. | DESCRIPTION             | QTY |

\* NOT ALL PARTS ARE CATALOGUED



# Warranty

## GE Built-In Electric Oven Warranty



All warranty service provided by our Factory Service Centers, or an authorized Customer Care® technician. To schedule service, on-line, visit us at [ge.com](http://ge.com), or call 800.GE.CARES (800.432.2737). Please have serial number and model number available when calling for service.

### For The Period Of:

### GE Will Replace:

#### One Year

From the date of the original purchase

**Any part** of the oven which fails due to a defect in materials or workmanship. During this **limited one-year warranty**, GE will also provide, **free of charge**, all labor and in-home service to replace the defective part.

### What GE Will Not Cover:

- Service trips to your home to teach you how to use the product.
- Improper installation, delivery or maintenance.
- Failure of the product if it is abused, misused, or used for other than the intended purpose or used commercially.
- Replacement of house fuses or resetting of circuit breakers.
- Damage to the product caused by accident, fire, floods or acts of God.
- Incidental or consequential damage caused by possible defects with this appliance.
- Damage caused after delivery.
- Product not accessible to provide required service.

**EXCLUSION OF IMPLIED WARRANTIES—Your sole and exclusive remedy is product repair as provided in this Limited Warranty. Any implied warranties, including the implied warranties of merchantability or fitness for a particular purpose, are limited to one year or the shortest period allowed by law.**

*This warranty is extended to the original purchaser and any succeeding owner for products purchased for home use within the USA. If the product is located in an area where service by a GE Authorized Servicer is not available, you may be responsible for a trip charge or you may be required to bring the product to an Authorized GE Service location for service. In Alaska, the warranty excludes the cost of shipping or service calls to your home.*

*Some states do not allow the exclusion or limitation of incidental or consequential damages. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. To know what your legal rights are, consult your local or state consumer affairs office or your state's Attorney General.*

**Warrantor: General Electric Company, Louisville, KY 40225**